

LECTURE XXI.

Hysteria from Defective Menstruation in a Widow Woman, aged twenty-nine Years, the Mother of two Children, the youngest six Years old.—Final Cessation of the Menses in a married Woman, aged forty-two Years, the Mother of five Children.—Suppression of the Menses of two Years and four Months duration, in a married Woman, aged twenty-six Years, the Mother of two Children, from Imperforate Os Tincæ, the result of Inflammation.—Physometra in a married Woman, aged thirty-two Years, the Mother of seven Children.—Engorgement of the Uterus from Suppression of the Menses, resulting in Catalepsy, in a married Woman, nineteen Years of age.—Complete Occlusion of the Meatus Urinarius.—Operation.—Suppression of the Menses, occasioned by Periodical Hemorrhoidal Bleedings.—Vicarious Menstruation.—Abscess of the right Labium Externum, in a married Woman, twenty-two Years of age, from Difficult Parturition.—Placenta Prævia in a case of Twins, expelled from the Uterus after a seven Months' Gestation, with one Placenta, and one Amnion and Chorion, both Cords inserted into the Placenta nearly in juxtaposition, each Fœtus presenting evidences of Incipient Hydrocephalus, and each bearing marks of having been Dead for two or three Weeks.—Deep Ulceration of the Cervix Uteri in a married Woman, aged thirty-one Years, the Mother of eight Children.

HYSTERIA FROM DEFECTIVE MENSTRUATION IN A WIDOW WOMAN, AGED TWENTY-NINE YEARS.—Rachel M., aged twenty-nine years, the mother of two children, the youngest six years old, has, for the last six months, suffered from menstrual irregularity; she is regular as to time, but irregular as to quantity, the function not continuing at each period more than one day. She is greatly depressed in spirits at times, and her nervous system is much deranged, with occasional paroxysms of laughter, alternating with those of sobbing; she complains of a ball in her throat (*globus hystericus*), together with a sensation of choking, palpitation, and a frequent desire to pass water. "Were your courses always regular, madam, previous to the last six months?" "Always, sir." "Did you ever experience the nervous turns of which you speak before that time?" "Never, sir; they have only come on me within the last four months." "How are your bowels?" "They are confined, sir." The case before you, gentlemen, is one of hysteria, an affection which has been variously described, and variously understood. It is a disorder of frequent occurrence, and though seldom fatal, yet, through the phenomena which accompany it, hysteria necessarily produces more or less anxiety. The ancients entertained singular, if not ludicrous views

respecting this affection; they attributed it in part to certain wanderings of the uterus, imagining that this organ, or an aura from it, passed from one portion of the system to another, and thus caused the hysteric paroxysm. Again, another doctrine prevailed, which taught that hysteria proceeded directly from the brain—hence you will read in the books of *uterine hysteria*, and *cerebral hysteria*. It is a very remarkable fact that the early fathers, ignorant of physiology, and unable as they were to summon to their aid, in their diagnosis of disease, the beautiful laws which this science has developed, should so often have approached the truth, without being able to give, if I may so speak, “a reason for the faith that was in them.” In their exposition of hysteria, they were right in one sense—but their attempted elucidation of opinion was ludicrous in the extreme. They were right in referring the phenomena of hysteria to the uterine organs, and this was because they were accurate observers; they were absurd in the explanation of their hypothesis, because they were deprived of the knowledge which physiology alone can supply. All honor to the early fathers of our science! I love to look back upon those ancient men, whose history is written in their works, and to whom is due the merit of having laid the broad foundation of that glorious superstructure which, though not complete, is in rapid and healthy progress through the well-directed efforts of the men of our own times.

Hysteria, I believe, to be a disease traceable, in most instances, to irritation of the sexual organs, and this can be demonstrated in the best of all schools—that furnished by the bed-side. With this explanation of the Protean forms assumed by this singular malady, there can be no difficulty in understanding how completely, under ordinary circumstances, it will be within control; while on the other hand, regarding it as an idiopathic affection, it can be readily seen how necessarily it must prove rebellious to remedies. Hysteria is an effect, a reflex nervous derangement due to sexual irritation. The focus of irritation lies in the sexual system—the evidences of this irritation displaying themselves in the abnormal acts of one or more of those organs dependent for healthy function on the undisturbed condition of the spinal cord. That hysteria is the result of reflex action seems to me to be abundantly demonstrated. Sir Benjamin Brodie relates some striking instances in proof of this fact, such, for example, as pressure on a sensitive ovary, producing the hysteric paroxysm. The same distinguished authority also mentions a curious circumstance sometimes observed in the progress of hysteria, viz.: a peculiar relaxation of the joints, followed by sub-luxation. Some authors deny that hysteria is entitled to be classed among the disorders of reflex nervous disturbance from sexual irritation, for the reason that there is oftentimes in this affection an entire want of sensation in the uterus and ovaries. It has, however, been demonstrated that the presence of sensation is not material to the exhibition of the reflex phenom-

ena. You will often recognize, in certain affections of the uterus, an absence of suffering on pressing the part affected, and yet hysteria will occasionally be present. Although in a very large proportion of cases it has been found that hysteria is accompanied with more or less organic lesion of the uterine organs, varying from the simplest form of structural disease to the most destructive and malignant, yet this lesion is not absolutely necessary to the production of the malady, for the evidence is conclusive that hysteria will arise from nervous irritation alone of these organs; such, for example, as frequently supervenes from merely functional disturbance.* This, it appears to me, is the only practical view that can be taken of this affection. After all, what avails hypothesis in our profession, so far as the regulating of the deranged mechanism is concerned, unless it lead to substantial results, which will enable us to repair that mechanism, and impart to it a natural and healthy play? The preservation of health, and its restoration when deranged, are the two great objects of our science. To the attainment of these objects, therefore, the physician can not give attention too profound.

I have just told you that the bed-side reveals the close connection which subsists between hysteria and irritation of the sexual organs, and practitioners of careful observation, those who are not content with isolated facts, but look to the aggregate of testimony, will concur fully in the interesting statistical tables of Landouzy upon this subject. In three hundred and fifty-one cases of hysteria, this disease was observed most frequently, 1st. Between the ages of fifteen and twenty years; 2d. From twenty to twenty-five; 3d. From ten to fifteen; 4th. From twenty-five to thirty; 5th. From thirty to thirty-five. It is an affection neither of early childhood nor of advanced life—in a word, it develops itself during the period in which the sexual organs, if I may so call them, are active and dispensing centers. At the period of puberty, when the irritation consequent upon the transition state of these organs is well-marked, and of no equivocal character, hysteria is of frequent occurrence; while, on the contrary, at the period of the final cessation of the menstrual function, when these organs have completed their office, and the summer of woman's life has passed into the cold shades of winter, this affection is

* Landouzy gives the following as the results of his observation in the autopsy of persons affected with hysteria, who have died of some other affection. In thirty-nine cases, only three exhibited lesions of the brain, three lesions of the respiratory organs, while in twenty-nine there was structural disease of the uterus, or its annexæ. If, on the other hand, we look at the results of observation in hysterical women, during life, the important fact is established that in twenty-seven cases, disease of these latter organs was recognized in twenty-six instances. This certainly, as far as it goes, is very strong, if not conclusive, testimony in favor of the connection between hysteria and an abnormal state of the sexual system, whether from structural lesion, or functional derangement. [*Traité complète de L'Hysterie, Paris, 1846.*]

extremely rare. It has been assumed, by certain writers, that hysteria is confined exclusively to the female sex; others, however, state that it will occasionally present itself in the male. I can not conceive why sexual irritation in the male should not, as in the female, result in the development of this affection. It is, indeed, comparatively rare in the former, but that it does sometimes exist, I have no doubt; indeed, I have positive evidence of the fact. About four years ago, I was consulted in the case of a boy, aged sixteen years, who for six months previously had exhibited the leading phenomena of hysteria. He had been subjected to a variety of medication, without deriving the slightest benefit; his health was declining, and much anxiety felt in his regard. On being consulted, I examined the case with care, and after a thorough investigation of its entire history, I discovered, through the confession of the boy, that he had fallen a victim to that most dangerous vice—*onanism*. With this fact before me, I had no difficulty in connecting the hysteric affection with its true cause—sexual irritation. By a systematic course of treatment, and constant appeals to the good sense of my patient, whose intelligence was of a high order, and who deeply deplored the weakness of which he had been guilty, I succeeded in breaking up this vicious propensity, and the hysteria, which was but an effect, soon disappeared.

Causes.—All those influences which are calculated to give early development to the sexual organs; hence females who are educated in the midst of excitements incident to large cities are much more subject to this affection than girls who are reared amid the more frugal circumstances of country life. Hysteria does not appear, according to the observation of those who have attended particularly to this subject, to be more frequent among prostitutes. On the contrary, continence and restraint from sexual intercourse, among those who have been accustomed to it, seem to exercise a marked influence in the frequent production of this disorder. Women of extreme nervous susceptibility are much more predisposed to hysteria than those of a more equable temperament. It has been supposed that the disease is hereditary; I should rather admit that the temperament which predisposes to the affection is hereditary, and that, *cæteris paribus*, it would be more likely to occur in a female whose mother had been subject to it. The prominent causes of hysteria are diseases of the uterine organs, both structural and functional, and I have known both ante-version and retro-version of the uterus to give rise to it. Hysteria is sometimes traceable to the peculiar condition of the blood; for example, in anæmia the hysteric paroxysm is often observed, as is proved by its occurrence in chlorosis. Among the circumstances which favor the production of hysteria, there is one which seems to exert a very marked influence—I mean a warm climate; and this is in harmony with what we have said touching the influence of the sexual organs on this disease, for affections of these organs are extremely frequent in tropical climates. Some years ago, the idea was not only

prevalent, but popular, that hysteria was due to spinal irritation. There is a fashion in medicine, as there is in dress and other toilet articles, and it is my duty to guard you against the seductive allurements of *fashion*, so far as your profession is interested. Griffin, Tate, Teale, Brown, and others, published their several experiences on "spinal irritation." The former in a work entitled "Functional Affections of the Spinal Cord," and "Ganglionic System of Nerves;" and Tate in his work on "Hysteria." On the appearance of these publications, a new idea seemed to take hold of the profession, and, for the time being, the doctrine of "spinal irritation," was in the ascendant. It had been observed by these writers that there was a certain coincidence between hysteria and "spinal irritation," and the conclusion had been too easily reached that the latter was the cause of the former. With this exclusive view of the pathology of hysteria, I need not tell you what unnecessary suffering was often inflicted by issues, blisters, escharotics, etc., nor need I remind you that, with such abstract views, hysteria frequently proved rebellious to remedies. That hysteria will occasionally, and perhaps oftentimes does exist simultaneously with "spinal irritation," is a fact familiar to every observing practitioner, but that "spinal irritation" does not necessarily bear to hysteria the relation of cause and effect is a fact no less obvious. Have I not frequently exemplified by cases in this Clinique, the interesting pathological truth that the *spinal cord* does sometimes, instead of being the primary seat of irritation, become secondarily affected, and this, too, through the afferent nerves, constituting another instance of eccentric nervous disturbance? If this be true, and the fact is now universally conceded, being the result of that important physiological law of reflex action, first explained by Marshall Hall, is it not at once manifest that spinal irritation will very frequently be the effect instead of the cause of hysteria, and is not this latter fact in perfect harmony with the opinion we have expressed, that hysteria is traceable to irritation of the sexual organs? Both in organic and functional disturbance of the uterus, there is very often tenderness of the spine. So that, when "spinal irritation" exists, before attempting to remedy it, first ascertain when the irritation commenced in this nervous center, and whether it be the result of irritation originating in the peripheral extremities of the nerves.

Symptoms.—Very often, but not always, there will be a series of phenomena exhibiting themselves for one or more days, preliminary to an attack of the paroxysms—these phenomena consisting in depression of spirits, restlessness, frequent desire to pass water, etc. Hysteria is sometimes characterized by convulsive movements; at other times, no convulsions are present during the attack. The symptoms of this disorder are sometimes local, sometimes general. In the former case, the disturbance is limited to the respiratory nerves, producing spasm of the glottis, bronchii, etc.; the patient has turns of laughing, crying, palpitation, etc.; the *globus hystericus*, that peculiar sensation of a ball in the

throat, is also quite characteristic of this affection. In general hysteria, the muscles of animal life will be involved in both clonic and tonic spasms affecting the limbs of one or both sides, as also other portions of the body. Tympanites intestinalis is often an accompaniment of hysteria, and a profuse discharge of limpid urine not unfrequently takes place as the disease is about subsiding. In some cases, paralysis occurs.

Another interesting feature of this disease is connected with change in sensibility, which has been pointed out by Beau and others. They have shown that touch, pain, and temperature, may be either separately or collectively increased, diminished, or lost. These modifications in sensibility, however, can not be considered as pathognomonic of hysteria, for they are recognized also in chorea, chlorosis, hypochondria, etc. Sight, smelling, hearing, and taste, may also become more or less affected during an attack of hysteria. In one word, it is now admitted that every variety of paralysis of the motor, sensitive or sensorial nerves, may occur not only during the attack, but for days, weeks, and even months subsequently. These morbid conditions, as well as the paralysis, will sometimes subside spontaneously; and, as a general rule, there is no form of paralysis so readily curable as what may be termed the hysteric paralysis. Sometimes, in lieu of anæsthesia, there is in hysteria an increase of morbid sensibility, either in the organs of sense, or in the nerves of other portions of the body. It is even stated that the same part may be alternately anæsthetic and hyperæsthetic. The pulse, in hysteria, is rarely much affected; usually, it is somewhat slower than natural. There is seldom entire, but sometimes partial loss of consciousness.

Diagnosis.—Hysteria, under certain circumstances, might be mistaken for epilepsy and eclampsia; hypochondriasis and insanity, too, are classed among those affections with which possibly it might be confounded. But, as a general rule, hysteria is so well defined by the symptoms peculiar to it alone, that error of opinion as to its true nature can scarcely arise. In epilepsy, there are invariably unconsciousness and a state of anæsthesia; in hysteria, unconsciousness is rare, and never complete, active stimulants always producing more or less sensation. In eclampsia, there is no constriction of the throat, no *globus hystericus*, but there is loss of consciousness, and the interval between the paroxysms is marked by coma more or less profound.

Prognosis.—Hysteria can not be considered by itself a dangerous affection. Post-mortem examinations do not reveal any lesions of the nervous system when death, from other causes, ensues. As a general rule, the hysteric paroxysm is suspended during gestation.

Treatment.—It can scarcely be necessary for me to discuss in detail the various remedies recommended in hysteria. These remedies can only prove serviceable when administered with a good and justifiable motive. The propriety of the motive must necessarily depend upon the adaptation of the remedies to the removal of the particular cause which gives birth

to the hysteric phenomena. The first duty, therefore, of the physician in being called to a patient laboring under hysteria is to investigate carefully all the circumstances of the case. He will ask himself, Is it due to organic disease of the uterus, or to functional derangement of this organ, in the form of some one of the menstrual aberrations constantly observed in practice, or may it be traced to simple displacement of the uterus? Does it originate from an anæmic state of the system, etc.? These are the questions which are first to be determined, and on their just solution will, as a general principle, depend the successful issue of the case. I have repeatedly directed your attention to the means to be employed in the various organic and functional derangements of the uterus; and, therefore, I shall not refer to them now. In hysteria, resulting from anæmia, quina, or its various preparations, is the remedy on which you are chiefly to rely. Here I might, however, mention that the anæsthetic remedies, such as sulphuric ether, and chloroform will, by their action in diminishing reflex sensibility, prove highly serviceable, if not as curative, at least as palliative agents in breaking the intensity of the paroxysm. As to the treatment of paralytic hysteria, it would seem that galvanism is the most successful remedy; and it is not a little strange, as has been proved, that a single application of a powerful galvanic current will cure a paralysis of sensibility which has continued for days, and sometimes for weeks. Now, gentlemen, allow me to ask you to recur in memory to the conversation, which took place a few minutes since between this patient and myself, and you will, I think, experience no embarrassment in referring the hysteria in her case to its proper cause, viz., defective menstruation. Let this function be properly reëstablished, and you will probably hear nothing more of the hysteric phenomena. Under ordinary circumstances, in the management of a case of hysteria, you are not to forget the importance of moral treatment. In certain forms of this affection the patient can often exercise through her will a salutary influence. I think, in the case of the patient before us, the following combination will have a beneficial effect:

R Aloes Barbad.	. . . . .	℞ij
Sulphat. Ferri	. . . . .	℞j

Ft. massa in pil. xx dividenda.

Let one of these pills be taken twice a day.

FINAL CESSATION OF THE MENSES IN A MARRIED WOMAN, AGED FORTY-TWO YEARS.—Mrs. S., aged forty-two years, the mother of five children, the youngest five years old, has always menstruated with regularity, except during the periods of pregnancy and lactation. Her general health has been good until within the last ten months. Her menses ceased one year ago; since that time she has suffered from headache, vertigo, and a sense of suffocation; her bowels, also, have been quite torpid. She is a woman of strong muscular development, with a flushed countenance, and a pulse indicative of a plethoric condition of system.

This case, gentlemen, is but the type of what you will frequently meet with in practice. The symptoms are the direct consequences of extreme vascular fullness, and this state of system is not unusual in what is termed the period of final cessation. The system, it must be remembered, has been accustomed for a number of years to a monthly sanguineous evacuation *per vaginam*; when this evacuation ceases, plethora is not unusually the result. The final cessation of the menstrual function does not occur at any uniform period; various circumstances will influence the early or late advent of this important climacteric in the female. It may be said, as a general rule, to occur between the fortieth and fiftieth years of age; but there are numerous exceptions to this rule, some women ceasing to menstruate as early as thirty years, and examples are recorded on accepted authority of the menstrual function continuing as late as the seventieth year. For my part, I am disposed to regard these latter as somewhat apocryphal, and believe, if carefully analyzed, they will be found not really cases of menstruation, but simply the evidences or results of morbid action. The period of final cessation has, with much propriety, been called the critical time of female life, and for the following obvious reasons: 1st. If there should be a tendency to carcinomatous or other malignant disease, either of the breast or cervix uteri, this tendency during the menstruating period will be measurably held in check by the monthly loss which the female sustains; 2d. Should there be predisposition to apoplexy, or engorgement of any organ, including the womb and ovaries, its development for the same reason will be more likely to occur at the time of the final cessation of the menses, for the waste-gate, which has hitherto proved so salutary, is now closed, and no derivative influence is exercised to hold in check this predisposition.

Attention, therefore, is always to be paid to the female at this critical climacteric, and it is the duty of the physician sedulously to guard her, as far as may be, by appropriate treatment against the various morbid influences, which are so apt to follow the final suspension of the menstrual function. It is asserted by Wilkinson King, that nearly one half of the women who die at about forty-four years of age, succumb from cancer. In addition to structural and malignant diseases, so common at this period of female life, the brain and nervous system become both primarily and secondarily the seats of irritation; these important portions of the economy, however, are much more frequently affected in a secondary manner, giving rise to that series of nervous phenomena described under the term of eccentric nervous disturbance. Hence, it is not very uncommon to observe at this crisis the various forms of paralysis—some ephemeral, others permanent; while the varieties of simple nervous irritation, without involving any particular lesion, are beyond calculation. It must be remarked, however, that many women, especially those whose lives have not been marked by any excess, pass this period of danger with impunity; and I have generally observed that, in such cases, they

become loaded more or less with adipose matter; the abdomen, from the deposit of this material on the omentum, etc., becoming protuberant. It is in instances like these that the protuberant abdomen has sometimes been mistaken for pregnancy, particularly in women who have never borne children, and who have indulged in an ardent desire for offspring. It is worthy of recollection that these women usually escape those nervous derangements to which we have already alluded, and it is explained in this way: the blood, which would otherwise, if I may so speak, crowd and irritate the nervous system, is diverted into other channels for the formation of adipose tissue, thus, in fact, opening a waste-gate, which protects the economy from harm. In the case of this woman there is happily no organic disease of the uterus, or other viscus. I have examined her *per vaginam*, and find the uterus, etc., in a healthy condition. The prominent symptoms of which she complains, and which, in fact, constitute her entire trouble, are the headache, vertigo, and a sense of suffocation. What are these? Nothing more than nervous phenomena from an undue pressure of blood. In a word, the nervous system is oppressed; it needs relief.

Treatment.—Let the patient be bled to z viij . The following powder should be given this evening, followed in the morning by z j of epsom salts:

R	Sub. Mur. Hydrarg.	.	.	.	.	.	gr. x	
	Pulv. Jalapæ	.	.	.	.	.	gr. xv	
	Pulv. Antimonial.	.	.	.	.	.	gr. ij	M.

Her bowels should afterward be kept regular by a wine-glass of the following mixture every morning, as circumstances may require:

R	Sulphat. Magnesiae	{	.	.	.	.	.	aa z j
	Sup. Tart. Potassæ	}	.	.	.	.	.
	Aquæ Puræ	.	.	.	.	.	.	Oj
								<i>Fl. Sol.</i>

The diet to be exclusively vegetable. The patient to take regular exercise. This treatment will, in a short time, remove the plethora, the circulation will become equalized, and the cephalalgia, etc., will disappear. I am in the habit in these cases where blood is rapidly made, and the plethora does not yield to ordinary treatment, of having recourse to an issue either in the arm or on the side of the spine. The issue which I prefer is made with the strong nitric acid.

SUPPRESSION OF THE MENSES OF TWO YEARS AND FOUR MONTHS DURATION IN A MARRIED WOMAN, AGED 26 YEARS, THE MOTHER OF TWO CHILDREN, THE YOUNGEST THREE YEARS OLD, FROM IMPERFORATE OS TINCE, THE RESULT OF INFLAMMATION—OPERATION.* Mrs. D., aged 26 years, the mother of two children, the youngest three years old, comes to the Clinique to-day with a cheerful countenance, and full of thanks for the benefit she has received. "Ah! madam, I am glad to see you." "Well, sir, I thought you would be pleased to know that I am cured."

* Page 318.

"Certainly, madam, that is the great object of our profession." This case, gentlemen, is one of peculiar interest. If you will turn to your note-books, you will have your minds refreshed as to its history. This patient, two years and four months before she came to the Clinique, had a miscarriage, and inflammation of the womb supervened. From that time she had labored under suppression of her courses, and suffered greatly from this circumstance. You will remember what she said with regard to the efforts made to bring on the menstrual function by means of forcing-medicine, etc., but all without effect. In making an examination *per vaginam*, I discovered that this woman had an imperforate os *tincæ*, the result, no doubt, of the inflammation with which she had been attacked two years and four months previously. I discussed the whole case with much minuteness, and called your attention emphatically to its interesting feature, viz.: *an imperforate os tincæ in a female who had borne two children*. The uterus was also enlarged in consequence of the monthly accumulation of the menstrual fluid, there being no exit for it to pass from the system. In a word, gentlemen, I remarked to you that no medicine, no matter how potent its emmenagogue properties, could possibly cause fluid to pass through the vagina, for the simple reason that there was a physical obstruction—the imperforate os *tincæ*. This patient, being a sensible woman, consented to an operation which, you will not have forgotten, I performed in your presence. The operation consisted in the introduction of a trochar into the central and inferior portion of the cervix uteri, parallel to the long axis of the organ. As soon as this was done, there was a profuse discharge of grumous blood, which was unquestionably the menstrual fluid contained within the cavity of the womb. A gum-elastic bougie was introduced daily for a few days, with a view of keeping the os *tincæ* open, or, in other words, preventing an agglutination. "My good woman, have you had your courses since the operation?" "Yes, sir, twice." "Were they natural?" "They were free, sir." "How is your general health?" "Oh, sir, I never was better in my life." "Then you do not regret what has been done for you." "No, indeed I don't, sir!" "Good morning, madam."

PHYSOMETRA IN A MARRIED WOMAN, AGED 32 YEARS, THE MOTHER OF SEVEN CHILDREN.* Mrs. C. returned to the Clinique to-day, and reported herself entirely restored to health. "I am glad to see you, madam; what is the state of your health?" "Oh! thank you, sir, I am quite cured." "Has the swelling entirely subsided?" "Yes, indeed, sir, I have nothing of it now." "Did you do what I directed?" "Yes, sir, I followed your orders." "Did your gums become sore?" "Yes, sir, the pills made them quite sore." "Did you take the decoction I ordered?" "Yes, sir." "You are certain that your health is now quite restored?" "Indeed I am, sir, and have come here to-day to thank

* Page 321.

you for your kindness." This patient you will remember, gentlemen, had suffered for the last eighteen months from enlargement of the abdomen; and the distention had increased to such a degree that it caused her much anxiety. When she first came to the Clinique we examined her with great care. Your attention was particularly directed to the peculiar form of the swelling, its resonance under percussion, the fact that it did not alternately diminish and increase in size, etc., etc.; and after a very full investigation of every feature of the case, looking at its history and all the circumstances attending it, we pronounced it *physometra*, which, as you know, means a collection of flatus within the womb. In the course of the questions addressed to the patient at that time, one very important fact was developed, viz.: that her last child, when born, was in a state of decomposition. To this latter circumstance I attributed the flatulent distention. Some authors are of opinion that *physometra* results from the entrance of air through the cervix of the organ. This I am disposed to doubt; and I believe it is due to certain chemical changes taking place within the cavity of the womb itself. Hence a blighted ovum, a retained and decomposed placenta or foetus, or the decomposition of any intra-uterine growth may all be enumerated as among the causes of this affection.

The treatment suggested was as follows: to introduce into the cavity of the uterus a tube for the purpose of evacuating as much as possible of the flatus. This I did at once with decidedly good effect. The patient was then ordered the following medicine:

℞	Pil. Massæ Hydrarg.	. . . . .	℥ij
	Pulv. Opii	. . . . .	gr. iv
	<i>℞. Massa in pil. xxiv dividenda.</i>		

One pill to be taken twice a day until ptyalism was produced—and then half a pint daily of the following decoction, for six or eight weeks:

℞	Decoct. Sarsaparilla c.	. . . . .	Ovij
	Acid Nitric dilut.	. . . . .	3vj M.

[Here the patient was placed on the bed—there was not the slightest trace of distension; the abdomen was flat; and, on an examination *per vaginam*, the Professor ascertained that the uterus presented its normal dimensions.] This case is gratifying in its results, both as regards the diagnosis and treatment.

ENGORGEMENT OF THE UTERUS FROM SUPPRESSION OF THE MENSES, RESULTING IN CATALEPSY, IN A MARRIED WOMAN 19 YEARS OF AGE.* Mrs. T., aged 19 years, who, it will be recollected, had suffered from cataleptic convulsions for the past five months, returned to-day and said she was much relieved—her courses had appeared, and since their return she had no attack of catalepsy. This case, gentlemen, is full of interest. You will remember when the patient first presented herself here, I discussed very fully the various points, and directed your attention to the

* Page 331.

fact that the catalepsy was due to the menstrual suppression and the consequent engorgement of the uterus, affording another example of eccentric nervous disturbance. The catalepsy, we told you, was simply an effect. We paid no sort of attention to it, but directed our remedies to the restoration of the menstrual function, and removal of the engorgement. For these purposes we recommended the following treatment :

One dozen leeches to be applied to the vulva, and the bleeding to be promoted by warm fomentations and poultices ; the three following pills to be taken at night, followed in the morning by $\mathfrak{z}\text{j}$ of castor oil :

R	Sub. Mur. Hydrarg.	.	.	.	.	.	gr. xij
	Pulv. Ipecac.	.	.	.	.	.	gr. i
	<i>F℥. Massa in pil. iij div.</i>						

The bowels afterward to be kept in a soluble state by a wine-glass of the following saline mixture, as circumstances may require :

R	Sulphat. Magnesiae	}	.	.	.	.	.	aa $\mathfrak{z}\text{j}$
	Sup. Tart. Potassae		.	.	.	.	.
	Aquæ puræ	.	.	.	.	.	.	Oj
	<i>F℥. sol.</i>							

At the time of the expected menses, when the bearing-down pain is increased because of the menstrual molimen, one dozen leeches should again be applied to the vulva. The diet to be strictly vegetable, and the patient to exercise as little as possible.

These were the directions given to this patient when she first came here. "Now, my good woman, will you be kind enough to tell us whether you faithfully observed what we told you?" "Indeed I did, sir; every thing was done just as you ordered." "How often were you leeches?" "Twice, sir." "How is your health now?" "It is much better, sir." "Have your courses become restored?" "Yes, sir." "Have you had a convulsion since they appeared?" "No, sir, and I feel better than I have done for ten years." "I am glad to hear it, my good woman." I am much gratified with the result of this case; it is an important one to be remembered, for it involves a valuable principle.

COMPLETE OCCLUSION OF THE MEATUS URINARIUS, WITH COHESION OF THE WALLS OF THE UPPER FOURTH OF THE VAGINA; TOGETHER WITH VESICO-VAGINAL FISTULA, IN A MARRIED WOMAN AGED 22 YEARS, PRODUCED BY INSTRUMENTAL DELIVERY.* Mrs. R., aged 22 years, married, returned to-day to be operated on for the adhesion of the walls of the vagina. This case, gentlemen, you will remember with much interest. It is one of the results of careless and unpardonable practice. I propose to-day to divide the adhering portions of the vagina. [Here the patient was placed on the bed, and the Professor proceeded with the operation as follows: taking his finger as a guide, he introduced a blunt pointed bistoury, and cut carefully upward and downward, thus separating

* Page 346.

the walls of the vagina—a sponge tent covered with oil-silk was then introduced.] This is all I shall do for the present. It will be proper to remove the tent once a day, and gradually to introduce one of a larger size. The object of the tent is twofold: 1st. To prevent reunion of the parts; 2d. To produce a dilatation of the opening.

SUPPRESSION OF THE MENSES OCCASIONED BY PERIODICAL HEMORRHOIDAL BLEEDINGS—VICARIOUS MENSTRUATION.* Mrs. L., aged thirty-two years, widow, the mother of two children, the youngest eight years old, returned to-day to the Clinique. “Well, madam, what is the state of your health now?” “Thank you, sir, I am much better.” “Did you take the sulphur as directed?” “Yes, sir.” “Are your bowels more regular than they were?” “Yes, sir, and my courses have returned upon me.” The patient before you had suffered for the past two years from suppression of the courses. She also had been afflicted with bleeding piles. It was a case of vicarious menstruation. The indication, I mentioned to you, was to remove the constipation, which, no doubt, was the cause of the hemorrhoids. “How are the piles, madam?” “They don’t trouble me now, sir.” “I am glad to hear it, my good woman. Good morning!”

ABSCESS OF THE RIGHT LABIUM EXTERNUM IN A MARRIED WOMAN, TWENTY-TWO YEARS OF AGE, FROM DIFFICULT PARTURITION.—Mrs. S., aged twenty-two years, married, the mother of one child, three weeks old, returned to-day, and stated that she was entirely relieved. This patient, gentlemen, a few days after the birth of her last child, complained of a swelling in her genitals. Her labor had been severe, and of three days’ duration, the consequence of which was a tumefaction of the right labium externum. You will not have forgotten how particularly I directed your attention to the necessity of a just discrimination as to the true nature of the swelling with which these parts occasionally become affected. I told you that the swelling might result from, 1st. Hernial protrusion; 2d. Serous engorgement; 3d. Sanguineous engorgement; 4th. Simple hypertrophy; 5th. Purulent engorgement from abscess. In the examination of this patient, we discovered that she had an abscess of the right labium. Fluctuation was very distinct. I opened the abscess in your presence, and half a tumbler of pus immediately escaped. An emollient poultice was ordered, and this constituted the entire treatment. “You are quite well now, my good woman, and you can go home.” “Thank you, sir.” “Very welcome, madam. Good morning!”

PLACENTA PRÆVIA IN A CASE OF TWINS WHICH WERE EXPELLED FROM THE UTERUS AFTER A SEVEN MONTHS’ GESTATION, WITH ONE PLACENTA, AND ONE AMNION AND CHORION, BOTH CORDS INSERTED INTO THE PLACENTA NEARLY IN JUXTAPOSITION, EACH FÆTUS PRESENTING EVIDENCES

OF INCIPIENT HYDROCEPHALUS, AND EACH BEARING MARKS OF HAVING BEEN DEAD FOR TWO OR THREE WEEKS.—Mrs. K., aged thirty-two years, the mother of three healthy children, consulted me on the 6th of October last in consequence of an anxiety she experienced in not having felt for the past week the motion of her child, she then being about six months pregnant. She remarked at the time that a few days before consulting me she had become very much frightened by a horse, and since that time she had not felt life. With the exception of words of encouragement, and recommending thirty drops of the tincture of hyoscyamus when she became nervous, nothing was suggested in her case. On the 6th of November the husband requested me to visit his wife, stating that she thought she was in labor, and was now flowing very profusely, having been troubled more or less in this way for the last week. In an hour from the time I received the message I saw the patient, and found her with labor pains just commencing, and flowing quite freely. In making a vaginal examination, I discovered the os uteri dilated and soft, and distinctly felt a doughy substance presenting, which I recognized to be the placenta, and which at once accounted for the hemorrhage. With the amount of blood the patient was losing, together with the fact that the mouth of the womb was *soft* and *dilatable*, it was obviously my duty to lose no time, but to proceed without further delay with the delivery. In accordance, therefore, with this object, I carried my hand to the neck of the uterus, and separated about one fourth of its attachments to the placenta, which enabled me to feel the presenting part of the foetus, which I soon recognized to be the breech. It was my intention at once, in separating the placental attachments, to introduce the hand into the uterus, and terminate the delivery by bringing down the foetus. As, however, the uterus contracted with great efficiency soon after I had recognized the presentation, and as it was quite evident that the breech of the foetus was descending into the pelvic excavation, I judged it advisable to submit the delivery to nature.

The pains increased so rapidly in expulsive force that not more than five minutes elapsed before the birth of the foetus was accomplished. As the child was passing into the world, with one hand applied to the abdomen of the mother, I soon discovered that although there was a sensation of hardness imparted to my hand, the uterus was but slightly diminished in volume. At the same time my attention was drawn to the peculiarity exhibited by the umbilical cord. At the first glance it occurred to me that it was an example of what authors have described as the *knotted cord*, two instances of which I have had in my practice. In this character of cord there are distinct knots, formed most probably by the evolutions of the foetus in utero. I soon discovered, however, that no such peculiarity existed in the present case. The enlarged uterus caused me to suspect the presence of another foetus, and, in carrying my hand up, my suspicion was confirmed. The uterus contracted with en

ergy, and in less than ten minutes the second foetus was expelled. Both were in a state of decomposition.

The peculiarity of the umbilical cord is explained as follows: The cord of one foetus was completely twisted round that of the other in its whole extent, presenting the aspect of the *knotted cord*. On the expulsion of the second foetus, the uterus became diminished in size, and was felt in the hypogastric region well contracted. I then passed my hand up, and removed the placenta, a portion of which I had previously detached from the cervix. *There was but one placenta. The two cords were inserted into it nearly at the same point. There was but one chorion, and one amnion. The two fetuses were about equally decomposed, presenting the strong probability that their death was simultaneous.* About one hour and a half after the delivery, the foetuses and placenta were seen and examined by my colleague, Professor Van Buren, and also by my friends, Dr. George T. Elliott, resident physician of the Lying-in Hospital, and Dr. McNeil, who has charge of the dispensary connected with the University. I should have remarked that the cord which was twisted around the other, having its length curtailed, and also decomposed, became detached from the placenta on the birth of the second foetus. Professor Van Buren immediately detected, by means of the blow-pipe its place of attachment, which was in juxtaposition with the other cord.

The above, gentlemen, are the details of an interesting case of midwifery to which I was recently called, and I am happy to have it in my power to exhibit to you to-day the foetuses and placenta, which, on some accounts, may be regarded as *unique*. [Here the Professor exhibited to the class the foetuses, etc., and pointed out their peculiarities.] In reviewing the circumstances connected with this delivery, there are several points of interest, which naturally present themselves to our consideration, and when all the peculiarities of the case are examined, they certainly do present an aggregate which are not only unusual, but, in my opinion, without a parallel. What, then, are the peculiarities to which I allude? They are as follow: 1st. Implantation of the placenta over the cervix of the uterus; 2d. One placenta, one chorion, and one amnion; 3d. Both cords being inserted into the placenta in juxtaposition; 4th. Each foetus presenting evidences of incipient hydrocephalus; 5th. The evidences disclosed of the probable simultaneous death of the two foetuses; 6th. Breech presentation of both foetuses. These constitute the peculiarities of the case, and, I repeat, as a combination, as far as my knowledge extends, they stand alone. But what imparts special interest is the fact of one placenta, which, is single and perfect in itself; it is not, as you see, composed of two united into one, the points of union easy of recognition, as sometimes happens in plural births, but it is one entire placental mass.

If, now, you examine the membranes, you will find also that there is not a double set, but one distinct amnion and one chorion. In fact, there

is here, with the exception of the two cords, precisely what we should expect to find in a delivery in which there is but one foetus. Some authors have doubted the possibility of a twin birth with but one amnion, without a cohesion of the embryos. Without entering at this time into an argument to show how invalid this objection is, we have only to look at the case before us to become satisfied that it is possible for twins to exist with but one amnion, and no cohesion of parts ensue. Another interesting fact connected with this history is, that although there is but one placenta, and both cords are inserted into it, yet the umbilical vein and two umbilical arteries belonging respectively to each cord have a distinct circulation; or, in other words, do not communicate with each other. If, to this circumstance, be added the fact that there is not the slightest evidence of decomposition in the placenta, but, on the contrary, as you perceive, an aspect of freshness, precisely such as you would expect to find in the case of a healthy living foetus, we then have the curious coincidence of a healthy fresh placenta co-existing with two fetuses bearing the evidences of having been dead for some two or three weeks. This, certainly, presents a point for physiological discussion. Again, would it have been possible in this case for one foetus to have survived the other, as sometimes happens in cases of twin-births? My opinion is decidedly in favor of the negative. I now call your attention particularly to the aspect presented by these fetuses. They are both partially decomposed; and the interesting fact is, that each one exhibits a singularly identical amount of decomposition. You can detect no difference between the two; and the circumstance fortifies me in the conviction that vitality must have been destroyed in each at the same moment.

The mother had a prompt recovery, and is now in the enjoyment of good health.

DEEP ULCERATION OF THE CERVIX UTERI IN A MARRIED WOMAN, AGED THIRTY-ONE YEARS, THE MOTHER OF EIGHT CHILDREN.—Mrs. McD., aged thirty-one years, married, the mother of eight children, the youngest nine months old, says she has been in bad health for the last six years. "How long have you been married, madam?" "Ten years, sir." "Were you a healthy woman before your marriage?" "Yes, sir." "When did you first feel that your health was declining?" "About six years ago, sir, after the birth of my third child." "What did you complain of at that time?" "Pain in my back and hips." "Any thing else?" "Yes, sir; I suffered much from headache." "On what part of your head did you feel the pain?" "On the top of my head, sir." "Were you troubled with a discharge at that time?" "Not much, sir; but for the last two years I have suffered very much in that way." "Did the discharge color your linen?" "Yes, sir; it looked like corruption." "Does it continue now?" "Oh! yes, sir; it is getting worse every day." "Before you first noticed the symptoms which you have just mentioned, were you a

fleshy woman?" "Indeed I was, sir; I weighed one hundred and fifty-five pounds." "How much do you suppose you weigh now?" "Oh! sir, I am sure I have lost thirty pounds." "Have you any cough?" "No, sir." "How is your appetite?" "Very poor, sir." "Are your bowels regular?" "No, sir; they are all the time confined." "When did you begin to lose flesh?" "I think I have been losing flesh, sir, for the last four or five years." "Do you notice any thing peculiar about your water?" "Yes, sir, there is always a sediment in it; and I think, sir, there is something wrong about my kidneys." "Has any one ever told you that your kidneys were affected?" "Yes, sir; and I have been taking medicine for the gravel." "How long since you noticed the sediment in your water?" "Oh! a long time, sir; as much as twelve or eighteen months." The questions, gentlemen, which I have just addressed to this patient have elicited answers which will not be without profit to you. I have purposely instituted this conversation in order that you may appreciate, in the first place, its object, and, secondly, that you may thoroughly comprehend how clearly her replies establish the nature of the disease with which the patient is affected. You will very often, in the course of your practice, meet with cases of this character; and if you do not exercise a proper judgment, you will fail in affording relief. Cases like this, if successively treated—and the only element necessary to insure successful treatment is to know the true nature of the malady—will give you solid reputation, and secure you patronage equal to your highest aspirations. There is no difficulty in accumulating a fortune by the practice of your profession—it is in our profession as it is in the various walks of life, good workmen, men who are masters of their art, will always command occupation, and the highest prices. You have a glorious future opening before you—you live in a great country, and in a great age—and, allow me to say, you are now prosecuting a noble profession, one which will repay you a hundredfold for all the toil and sacrifice it costs you to understand its principles.

No truer maxim was ever promulgated than that which emanated from the mind of Lord Verulam: "Knowledge is power." For the physician it is the guiding star which, the more brilliantly it shines, with the greater certainty will it lead him to truth! Seek knowledge; with it you will go forth from this University well armed for the battle-field, a battle-field not radiant with the glitter of arms, nor marked by a thirst for human blood. Oh no! the contest in which you are to become engaged is with disease and death! These are the enemies of our profession, and if not promptly and efficiently met, their triumph will be complete.

In the case of the patient before us, it is quite manifest that spontaneous cure is out of the question. Without proper assistance, she must die—with it she will live. You have heard her story. She has pain in

her back and hips, headache, a purulent discharge from the vagina, loss of appetite, is constipated, is losing flesh, urine turbid, etc. What is her disease? Is it in her back, or head, or kidneys? Where is it? The troubles just enumerated are not diseases—they are shadows reflected from a source which has not yet been alluded to. This patient, I have very carefully examined, and find that she is laboring under deep ulceration of the neck of the uterus. This is the starting point of the difficulties—and on this alone is your attention to be concentrated. Remove the ulceration, restore healthy action to the uterus, and you will hear nothing more of the headache, etc., etc.

Causes.—Parturition, sexual intercourse, abortion, irritating injections, pessaries, instrumental delivery, etc., are among the causes of ulceration of the cervix uteri.

Symptoms.—Pain in the back and hips—often in one of the iliac fossæ—purulent discharge from the vagina, headache, nausea, loss of appetite, impairment oftentimes of the digestive functions, lithates in the urine, etc., are the usual accompaniments of this form of uterine disease. The connection between ulceration of the cervix and the symptoms just enumerated I have often explained to you.

Treatment.—You have heard this patient say that she has been treated for the *gravel*! It is not the first patient who has been treated for gravel, because of lithates in the urinary secretion resulting indirectly from ulceration of the neck of the womb. It is the very course a man would be likely to pursue who, in the practice of his profession, is in the habit of mistaking effects for causes. The patient became alarmed at the sediment in the urine, she mentioned it to the doctor, and he, looking no further than the sediment, proceeded with his therapeutic appliances. This fact is full of importance to you, and it should not be forgotten. We shall proceed with our treatment on different, and we think, more rational grounds. We shall pay no attention to the effects, but shall at once attack vigorously the cause. Ulceration of the cervix may be either acute or chronic. In the case before us it has assumed the latter character. The indication in this form of ulceration is twofold; 1st. Removal of the ulceration by local applications; 2d. The invigoration of the general health. As the ulceration in this case is deep and of long standing, I shall employ as a local caustic the *potassa cum calce*, a preparation admirably suited to this character of disease. The profession owe much to Dr. Bennet for the success which has attended his efforts to consolidate, like the nitrate of silver, into a stick this important remedy. The consolidation with the lime deprives it of all objections to its use as the *potassa fusa*, which, with the greatest possible care, will oftentimes destroy healthy structure, and produce unpleasant results.

[The patient was placed on the bed; the speculum introduced, and the ulcerated surface freely cauterized.]

This application must be repeated once in six days. For the constipated bowels the following to be taken :

R Hydrarg. c. creta. gr. x.

In the morning $\frac{3}{4}$ of castor oil. In order afterward to ensure a soluble state of the system, and at the same time with a view to its tonic effects, let a wine-glass of the following mixture be taken twice a day :

R Sulphat. Ferri	. . . . .	gr. x
Sulphat. Magnesiae	. . . . .	3 ij
Acid. Sulph. Dilut.	. . . . .	3 j
Infus. Gentianæ c.	}	aa 3 iv. M.
Infus. Rosas. c.		

"Now, madam, you can go home; return here next Monday, and you may feel quite certain that, if you will strictly follow our directions, you will, in the course of a few months, be restored to health." "Thank you, sir." "Good morning, madam."

LECTURE XXII.

Ovarian Dropsy.—Is it Curable?—Prolapsus Ani in an Infant, five months old.—Why do Infants cry?—Anæmia in a married Woman, aged thirty Years, with Incipient Anasarca, the result of profuse Flooding during a Miscarriage, three Months since; connection between profuse losses of Blood and intense Headache.—Two Forms of Anæmia.—Frequent desire to pass Water in a married Woman, twenty-seven Years of age, from Protracted Labor.—Hysteria, from Defective Menstruation, in a widow Woman, aged twenty-nine Years.—Sympathetic Cough in a Child, eighteen Months of age, from Intestinal Worms.—Suppression of the Menses in a married Woman, thirty-one Years of age, of nine Years' duration, from Chronic Inflammation of the Uterus.—Emmenagogue properties of Mercury.—Inversion of the Mucous Membrane of the Urethra in a married Woman, aged forty Years.—Serous Infiltration of the Labia Externa in a married Woman, aged twenty-seven Years, six Months Pregnant.—Partial Paraplegia in a married Woman, aged thirty-two Years, from Instrumental Delivery.—Strychnia.

GENTLEMEN—During the present winter you have had an opportunity of seeing several cases of *ovarian dropsy*, all of which have been introduced at the Clinique; and I endeavored, in discussing each of these cases, to direct your attention very particularly to the circumstances connected with their origin, progress, diagnosis, pathology, and treatment. You will recollect that I have emphatically expressed to you my opinion that ovarian disease, which is usually regarded as beyond the limits of medication, is, on the contrary, often under control; and if we are not always able to remove the tumor, very often we shall have it in our power, by judicious and *persevering* treatment, not only to check, but even diminish sensibly the enlargement. In confirmation of this opinion, I remarked that I could cite to you several cases which have occurred in my private practice, in which success has followed treatment; but I much prefer presenting other testimony—testimony which will be perfectly satisfactory to you, for it proceeds directly from the cases which have been treated in this Clinique; you are familiar with their history—your note-books will refresh your memories as to the condition of the patients when we commenced treating them, and you will have an opportunity, by inspecting these very cases *to-day*, of ascertaining whether any impression has been made on the tumors. To show you that I do not speak without authority that these cases are considered as beyond medication by men high in the profession, Dr. Ashwell holds the following language: "Much can not be expected from medicines in this formidable disease (*ovarian dropsy*) al-

though remedies as powerful as iodine, mercury, and the strongest diuretics have been ably and perseveringly used." Dr. Robert Lee observes: "Blood-letting, mercury, iodine, diuretics, emetics, long-continued friction or percussion, and a variety of other remedies have all been employed in encysted dropsy of the ovary, and in most cases without the slightest benefit." Mr. Safford Lee, one of the most recent writers on this subject, says: "In no disease has the application of medicine, hitherto, been of so little avail, as in ovarian dropsy. It has been acknowledged by many, and indeed by nearly all, who have attempted its cure, that medicine has no power over it." This, gentlemen, is strong and positive language, and comes from men of distinguished character, who possess the respect and confidence of the profession. Against these opinions, however, I beg leave to record my solemn protest. Opinions such as I have cited, given as they are *ex cathedra*, and carrying with them the weight of authority, unless substantiated by overwhelming evidence, will prove opinions not only of mischief, but of positive danger. If you receive them as oracular, and suffer them to become your guides in practice, they will not only paralyze all efforts on your part to disprove them, but they will, at the same time, deprive many a suffering patient not only of hope, but of remedial benefit. In a word, adopt these opinions, and to a patient who may consult you, laboring under ovarian dropsy, you will have little else to say than: Madam, your disease is without relief—I can offer you nothing in the way of hope, but I can say with certainty that death is your portion.

I shall now introduce to you successively three cases, which have been under treatment, and you shall judge whether with advantage or not:

CASE I. Presented at the Clinique for the first time, Monday, October 10th, 1851.—The following is taken from the record of that date: Mrs. R., aged forty years, widow, has one child, two years old. Menses regular. About eighteen months since, a small tumor appeared in the right iliac fossa, and has continued to increase to the present time. The abdomen is now larger than at the full term of pregnancy. The tumor presents an oblique aspect from below upward. The abdomen is extremely distended, the integuments are drawn tightly over the tumor, and they present a shining appearance. The patient complains of distress in the abdomen, difficulty in passing water, and obstinate constipation, a week often elapsing without an evacuation from the bowels. From her great size, Mrs. R. experiences much difficulty in walking, and is unable to attend to her ordinary duties. Distinct fluctuation is detected in the tumor.

Treatment.—With a view to a proper purgative effect:

R	Submur. Hydrarg.	. . . . .	gr. x
	Pulv. Jalapæ	. . . . .	gr. xv
			<i>Ft. Pulv.</i>

To be followed in the morning by $\frac{3}{j}$ of castor oil.

A wine-glass of the following saline mixture every morning, to ensure a soluble condition of the system :

℞	Sulph. Magnesiae	}	.	.	.	.	aa	℥j
	Supertart. Potassæ	}	.	.	.	.
	Aquæ distillatæ	.	.	.	.	.	Oj	
							<i>Ft. sol.</i>	

When the bowels have been freely opened, the patient to take one of the following pills every night :

℞	Protoiodid. Hydrarg.	.	.	.	.	gr. vj
	Ext. Conii	.	.	.	.	℥ij
						<i>In pil. No. xxiv divid.</i>

And a small portion of the following ointment to be freely rubbed over the abdomen once a day :

℞	Ungt. Hydrarg.	.	.	.	.	℥j
	Hydriod. Potassæ	.	.	.	.	℥ss
	Iodin. puræ	.	.	.	.	gr. iv
						<i>Ft. Ungt.</i>

This treatment to be continued until ptyalism is produced. Then discontinue the pills, and use the ointment twice a week.

At the Clinique of November 25th, Mrs. R. reported herself, and the following is taken from the record of that date : Continued treatment as ordered for five days, and profuse salivation occurred. She says she is now greatly relieved ; breathes freer ; walks with more comfort ; constipation removed ; tumor is somewhat softer ; thinks she feel a throbbing sensation in it. Omit pills, and continue ointment three times a week, with the saline mixture.

At the Clinique of December 27th, Mrs. R. returned. Bowels regular ; appetite improved ; sleeps well ; great diminution of pain in the abdomen ; passes water freely, and walks with much more ease ; complains of rigors, and a throbbing sensation. Continue ointment and saline mixture as heretofore ; omit pills. Ten drops of liquor potassæ twice a day in a wine-glass of flax-seed tea. Diet nutritious.

At the Clinique of January 20th, the patient returned greatly improved in every particular. Can walk comfortably ; sleeps and eats well ; bowels regular ; tumor soft, and evidently diminishing ; no pain in the abdomen.

Treatment.—The following ointment to be rubbed on the tumor three times a week :

℞	Ungt. Hydrarg.	.	.	.	.	℥j
	Hydriod. Potassæ.	.	.	.	.	℥ss
	Iodin. puræ	.	.	.	.	gr. vj
						<i>Ft. Ungt.</i>

Liquor potassæ ℥ij in a pint of compound decoction of sarsaparilla once a day ; nutritious diet.

At the Clinique of February 15th, Mrs. R. returned much improved in health. She declares the tumor has diminished one third ; she knows

it from the dresses she could not wear two months ago, and are now too large for her. The abdomen was shown to the class, and there was but one opinion as to the diminution in its size, and the general improved state of health. Omit ointment; continue the liquor potassæ and sarsaparilla; one pill twice a week.

CASE II. Oct. 23d, Mrs. H., aged 28 years, married five years, no children. Four years since she noticed a small lump the size of an egg in the right iliac fossa. Her menses had previously been irregular. The tumor now fills about one half of the abdominal cavity; obstinate constipation and irritation of the bladder.

Treatment.—For the constipation, two of the following pills as circumstances may require:

℞ Pulv. Aloes	}	.	.	.	.	.	.	āā	3 ss
Pulv. Rhei	}	.	.	.	.	.	.
Pulv. Ipecac.	.	.	.	.	.	.	.	gr. ij	
Saponis	.	.	.	.	.	.	.	℥ iss	
Aquæ puræ	.	.	.	.	.	.	.	q. s.	
<i>℞. Massa in pil. xxx div.</i>									

The following ointment to be rubbed on the tumor every night:

℞ Ungt. Hydrarg.	.	.	.	.	.	.	℥ ss
Iodin. puræ	.	.	.	.	.	.	gr. ij
<i>℞. Ungt.</i>							

Liquor potassæ gtt. xij in a wine-glass of infusion of colombo three times a day.

At the Clinique of November 29th Mrs. H. returned, and the following is from the record: Constipation removed—appetite improved—sleeps well. Continue treatment; if salivation occur, discontinue ointment. At the Clinique of December 28th Mrs. H. was reported as follows: General health much improved—salivation commenced two weeks since—tumor softer and smaller—use ointment every other night—and one of the following pills every fourth night.

℞ Protoiodid Hydrarg.	.	.	.	.	.	gr. vj
Ext. Conii	.	.	.	.	.	℥ ij
<i>℞. Massa in pil. xxiv div.</i>						

Discontinue infusion of colombo, and in lieu, one pint compound decoction of sarsaparilla, with 3j of liquor potassæ, daily.

CASE III. Mrs. J., aged 45 years, was married twelve years ago. She has been an invalid for the last ten years, and has never had children. About ten years since she first discovered a tumor in the left iliac region, the size of a walnut. Three months after noticing the tumor, she placed herself under the care of a professional gentleman; and in defiance of all that was done, it continued steadily to enlarge, until it completely filled the abdominal cavity, and rendered it almost impossible for the patient to walk with any degree of comfort. Mrs. J. has suffered a long

time from confined bowels, and this has constituted one of her greatest difficulties for the last few years. "The tumor has preserved," observes the patient, "a uniform and remarkable hardness."

"Madam, will you be kind enough to state when it was you first consulted me?" "Last February, sir." "What did I tell you at that time?" "You stated that from the long continuance of the tumor, and its immense size, you could hold out no encouragement." "Did I say any thing else?" "You told me that I had a disease of the ovary which, from its great size, made injurious pressure on my digestive organs, and this was the cause of my constipation." "Well, madam, when I told you that I could promise you nothing, but if you were willing to take the remote chance of being benefited, I would have no objection to see what I could do, did you believe your case to be without hope?" "Certainly I did; for I had been assured by all the physicians I had consulted that there was no help for me; and it was only through the persuasion of a friend that I had consented to see you, not that I had the slightest hope of receiving any benefit."

My object, gentlemen, in this conversation, is to inform you of the true state of things at the time I took charge of this case, in order that you may be fully posted up with its history, and judge from the present condition of the patient what have been the results of treatment.

Treatment.—For the purpose of freely opening the bowels, the following powder was ordered :

℞ Submur. Hydrarg.	gr. xij
Pulv. Jalapæ	gr. xx.
	<i>Fl. Pulv.</i>

To be followed in the morning by :

℞ Sulph. Magnesiae	3 ij
Infus. Sennæ	℥ iv
Tinct. Jalapæ	gtt. xxx
Mannæ	3 j
	<i>Fl. Sol.</i>

The following ointment was ordered to be rubbed over the tumor once a day :

℞ Ungt. Hydrarg.	℥ ij
Hydriod. Potassæ	3 ss
Iodin. puræ	gr. vj
	<i>Fl. Ungt.</i>

A pill containing one fourth of a grain of protoiod. hydrarg. and two grains of ext. of cicuta once a day. The ointment and pills to be discontinued as soon as salivation is produced; the patient then to take liq. potassæ 3j in half a pint of compound decoction of sarsaparilla once a day, and use the following ointment as soon as ptyalism is over :

℞ Hydriod. Potassæ	3 ij
Iodin. puræ	gr. vj
Adipis	℥ iv
	<i>Fl. Ungt.</i>

A pint of tepid water was ordered to be thrown daily up the bowels, in order to keep them in a soluble state. Together with the above ointment, the pills of protoiodid. hydrarg. and conium to be resumed, taking one every third night.

In July last, there was a very decided change, not only in the general health of the patient, but also in the character and size of the tumor. This lady, whose residence is in the western part of this State, returned home, and remained there during the months of August and September, but previously a nitric acid issue was placed on the side of the tumor. All treatment was ordered to be suspended during these two months, with the exception of the last ointment, which was used freely twice a week, and the sarsaparilla and liq. potassæ, which was taken daily, as prescribed above. In October last, this patient returned to the city, and so marked is the change in the tumor, that she, as a personal favor to me, has kindly consented to appear before you, and allow you not only to see the present condition of the tumor, but also to hear from her own lips an account of the case since it came under my professional care. [Here the patient was placed on the bed, and the tumor examined—the Professor very fully calling the attention of the Class to the various points of interest connected with it.] The following conversation between the Professor and his patient in the presence of the Class will tend to elucidate the results so far obtained from the treatment.

“Madam, how is your health now, contrasted with what it was last February, when I first saw you, and how does the present size of the tumor compare with what it was at that time?” “I am, doctor, not the same person. Then, I could not walk but with great distress; I was unable to attend to my domestic duties; dejected in spirits, without sleep, without appetite, without hope. Now, I can attend to the concerns of my house; I can walk with much more comfort; I sleep and eat with relish, and my mind is happy, because I know the tumor which has distressed me for so many years, has greatly diminished.” “How much has it diminished, madam?” “Should think at least one third. Look here, [the patient grasped the integuments covering the tumor, showed how much they were relaxed, and she pushed the tumor with facility from one side of the abdomen to the other.] I could do nothing like this last February; on the contrary, my greatest suffering was from the tightness of the skin over the tumor. The skin,” she continued, “was as tight as a drum, and the tumor perfectly immovable.” “Madam, how is it with your dresses?” “A wrapper, which I have not been able to make meet round me for four years, is now quite loose for me,” etc., etc.

This case, gentlemen, is one in which I feel a deep interest. The success of treatment is so manifest, that it seems to me impossible to doubt it, and yet I should have felt some reluctance in speaking of the case, if I had not been able to prevail on this good lady to appear before you,

and tell her own story. I have great confidence that I shall succeed in diminishing still more notably the bulk of the tumor.

Ovarian dropsy has called forth a great variety of remedial agents, other than those I have mentioned, and much difference of opinion exists as to their respective efficacy. Tapping, for example, is advocated by some, while others, and this has been especially tried with more or less success, recently, in France and England, suggest after the removal of the fluid, the injection into the sac of the tincture of iodine, with the hope of inducing adhesive inflammation of the walls of the sac, as takes place in hydrocele. *Tapping* and *pressure* have been resorted to, and several cases are reported as having been successfully treated in this manner; also artificial fistulous openings, with a view of drawing the fluid as fast as it accumulates, have been of late years highly recommended. This is the revival of a practice suggested by a distinguished French surgeon more than a hundred years ago. Excision of a portion of the cyst after the removal of the fluid by the trochar, and lastly extirpation of the entire ovary, have likewise been resorted to. I might also mention a favorite practice, in these cases, of Dr. Hamilton, said to have been successful in his hands, and indeed I think I have myself recognized good results from it. It consists in patting the tumor with the ends of the fingers several times during the day, together with pressure, and the internal administration of a solution of the muriate of lime.

PROCIDENTIA OF THE WOMB OF FIVE YEARS' STANDING, IN A MARRIED WOMAN, AGED FORTY YEARS.—Mrs. C., aged forty years, married, has one child, seventeen years of age. She has always been a hard-working woman, and enjoyed good health, until within the last five years, when she began to complain of pain in her back and sides, with severe dragging sensations in her groins, and occasional sick stomach. At that time she experienced much difficulty in passing water, and her attention was drawn to a tumor which projected from her person. She could only pass water by re-introducing the tumor into the vagina. Various instruments had been employed with the hope of supporting the tumor, but all without effect. Her walk is very much impeded by its presence, and she attends to her ordinary duties with much inconvenience and pain. [The patient being placed on the bed, the tumor was examined by the Professor, and shown to the Class.]

This, gentlemen, is a case of procidentia of the womb, not simply *falling* of the organ, but a case in which the organ is completely out of the vagina, and between the thighs of the patient. This is but one of several examples of this kind of displacement which you have had an opportunity of examining, the present session, in the Clinique; and allow me to tell you that physicians in a practice of forty years, will rarely see two cases of procidentia of the womb. It affords me great pleasure to have the means, through the good sense of this patient, to exhibit to

you so perfect an example of this form of uterine displacement. The organ, as you perceive, projects nearly three inches beyond the vulva. Here you recognize the *os tincæ*, rounded and contracted, which is usually the case in *procidencia*. The womb is completely between the thighs, and you can imagine the difficulty the patient encounters in an attempt to move about. I now place my finger on the lower third of the anterior surface of the projecting organ, and you see it comes directly in contact with a portion of the bladder. When describing the anatomy and relations of the pelvic viscera, you will not have forgotten that I told you of the difference in the arrangement of the peritoneum on the anterior and posterior surfaces of the uterus. On the latter, it is distributed throughout, while it covers only the two superior thirds of the former. The lower third, which is not supplied with peritoneum, is in contact through the medium of cellular tissue with the *bas-fond* of the bladder. You understand, therefore, why in *procidencia* of the womb, there should also be prolapsion of a portion of the bladder. You likewise perceive that the vagina is inverted, and the rectum is also partially prolapsed. From the long exposure of the uterus, the lining membrane of the vagina has the appearance of the ordinary integuments, and this very fact has sometimes given rise to the suspicion of hermaphroditism. One point of special interest to which I desire to call attention, is the change in the natural direction of the *urethra*. Here is the *meatus* looking directly upward, and this is the necessary consequence of *procidencia uteri*. In this circumstance you find the explanation of the difficulty in the attempt to pass water, and you must not allow this change in the direction of the *urethra* to escape memory, when called upon to introduce the catheter in cases like the one before us. [Here the Professor introduced the catheter, and drew off a pint of urine.]

Causes.—These may be divided into the predisposing and exciting; among the former will be found an unusually capacious pelvis, repeated pregnancies, and the consequent relaxation of the vagina, long-continued vaginal discharges, increase in the weight of the uterus, whether from disease, or from the superincumbent pressure of tumors, etc. Among the exciting causes may be mentioned *constipation*—which I consider a very common cause of *uterine* displacement—too early “getting up” after delivery, violent efforts, and carrying heavy weights, unnecessary traction on the umbilical cord with a view to extract the placenta, increased weight of the organ from chronic congestion, laceration of the perineum, etc.

Symptoms.—Pain in the back and groins, nausea and sometimes vomiting, irritation of the bladder and rectum, inconvenience and distress in walking, oftentimes inability to pass water without replacing the uterus, and sometimes serious ulceration of the sides of the organ from friction, etc.

Diagnosis.—*Procidencia* of the womb may possibly be confounded

with inversion and polypus of this organ; and I have seen one case of entire inversion of the mucous membrane of the vagina which had been mistaken for *procidencia uteri*. In inversion of the womb there is no os tincae—in polypus, also, there is no os tincae, the tumor is generally insensible, and its pedicle, attaching it to some portion of the internal surface of the uterus, is *upward*. In complete inversion of the vagina, however, you will discover an opening which may be mistaken for the os, but by introducing the finger into this opening you will reach the true os tincae within.

Prognosis.—Although there is nothing immediately dangerous in *procidencia uteri*, yet it becomes the medical man to be cautious in promising a permanent cure.

Treatment.—This may be divided into *palliative* and *curative*. For the former object, pessaries of various construction and material are recommended. As a general principle, I am opposed to pessaries, for they are mischievous, if not destructive, by the extreme irritation, which oftentimes they produce. I have seen sad havoc from their long-continued use, deep and serious ulceration being the consequence. In the present case, however, I shall introduce, after returning the womb, a common india-rubber ball, which is soft and unirritating, and which I have found, in displacements like this, to answer the purpose of sustaining the uterus better than any other pessary. The ball, as you perceive, has a small opening in it through which the air can be excluded, before introducing it into the vagina; as soon, however, as it has been introduced, it again fills with the atmosphere, and thus gives support to the uterus. It should be renewed every few days, and cleansed. It will be found very beneficial to throw, several times during the day, cold water into the vagina; and also cold hip-baths should be employed freely. [Here the Professor restored the womb to its natural position, and introduced the ball—the patient was then requested to rise from the bed and walk around the room, which she did with ease, and said she felt great support, and the uterus did not come down.] The curative remedy for *procidencia* consists in an operation in which the surgeon makes a triangular incision on the sides of the vagina; as a substitute for the knife, the actual cautery, or lunar caustic is employed; a cicatrix is thus formed, and the womb is supported by the consequent contraction of the vagina.

PROLAPSUS ANI IN AN INFANT FIVE MONTHS OLD—WHY DO INFANTS CRY?—Mary F., aged five months, has been troubled for the last two months with prolapsion of its bowel, which causes it much uneasiness. “Has your child, madam, suffered from dysentery or diarrhoea?” “No, sir.” “Have its bowels been constipated?” “No, sir.” Prolapsus ani, gentlemen, is often the result of two opposite causes, viz., diarrhoea and constipation; and you can readily understand why these conditions of

the system will be likely to produce falling of the bowel, or rather of the mucous membrane of the rectum. In diarrhoea, and especially in dysentery, the lining membrane becomes relaxed; and in addition to this relaxation, the child encounters in dysentery the effects of the tenesmus, which strongly tends to the production of the complaint. In constipation, too, the straining, in the attempt at defecation, often results in the prolapsion of the membrane. The mother, however, informs us that neither of these causes has operated in this case, the child not having suffered either from diarrhoea, dysentery, or constipation. We must therefore seek for some other cause. "Does your child cry much?" "Oh! yes, sir; and I think that has done it." "When it cries, does it sometimes strain and hold its breath?" "Yes, sir."

It is an interesting fact for you to remember that this excessive crying, accompanied, as sometimes it will be, by straining, is another cause of prolapsus ani. "Do you know, madam, why your child cries?" "I do not, sir." "Perhaps, madam, it is a little cross by inheritance!" "Yes, sir, I think that's it." Allow me, gentlemen, for an instant, to call your attention to the subject of crying in an infant, for it is well worthy of your consideration. Some infants are naturally cross, for, like children of an elder growth, they have their shades of temper. It often happens, however, that infants cry from positive pain, and this may be produced by over-feeding, colic, cold, etc. There is another cause, which I have observed on more than one occasion, and I shall mention it with the hope that it may hereafter benefit you in your diagnosis. Suppose, for example, you should be called to an infant, which from its birth had enjoyed excellent health, no derangement of its bowels, and its various functions in proper condition; with all this good health, it had not been given to crying, but, on the contrary, enjoyed a high reputation for uniformly good behavior. Suppose, again, that you are suddenly called to this infant, and find it almost in convulsions from the effect of crying. In reply to your interrogatory, the mother, perhaps, would tell you that the child had been perfectly well, and playful as usual; she had just completed its toilet and as she was about placing it in its cradle, it commenced shrieking as if it were in great pain. She could not still it; and anxious to know what had produced this change, one of you is sent for.

This hypothecated case will sometimes in practice become a reality, and it is proper that you should appreciate all its bearings. In a case such as I have described, I would advise you to adopt the plan which I have pursued, under like circumstances, more than once, viz., have the child stripped, and, in examining its little person, you will probably find a pin or needle piercing it. This may appear to you as a very simple matter, and scarcely within the circle of scientific discussion. But I hold that nothing is unworthy of the attention of the physician which, by possibility, may result in disease of body or mind. Again, in finding the pin or needle piercing the infant, what have you accomplished? You

will have accomplished that which is the true object of professional inquiry—you have discovered the cause. In lieu of attempting to lull the child to repose by the administration of anodynes—which is a pernicious and oftentimes a destructive practice—in lieu, too, of permitting the child to writhe under protracted suffering, which would be very apt to result in convulsions and death—you have exercised common sense; and while in the exercise of common sense you have relieved the infant, and imparted intense joy to the mother, you have done something for yourself. These matters do not pass for trifles in the sick room; they receive their full measure of appreciation. It is as true that the solid reputation of the medical practitioner rests upon details, as that aggregation in the physical world depends upon the accumulation of particles.

Treatment.—In prolapsus ani, produced by constipation or diarrhœa, the first object of the practitioner is to remove the cause of the prolapsion. In the former case, the constipation must be overcome; in the latter, the diarrhœa checked. The bowel, too, should be carefully returned after each evacuation; the best mode of accomplishing this is to take a piece of fine sponge, well oiled, and by gentle pressure on the prolapsed surface, it will be returned within the sphincter. A compress with a bandage may then be employed. For the purpose of producing an astringent effect on the returned membrane, a small syringe-full of the following may be thrown up the rectum twice a day:

℞	Tinct. Catechu	}	.	.	.	.	.	āā	3 ss
	Tinct. Kino	}	.	.	.	.	.
	Tinct. Hyoscyam.	.	.	.	.	.	.	3j	
	Aquæ puræ	:	.	.	.	.	.	3 iij	M.

ANÆMIA IN A MARRIED WOMAN, AGED THIRTY YEARS, THE MOTHER OF FOUR CHILDREN, WITH INCIPIENT ANASARCA, THE RESULT OF PROFUSE FLOODING DURING A MISCARRIAGE THREE MONTHS SINCE—CONNECTION BETWEEN PROFUSE LOSSES OF BLOOD AND INTENSE HEADACHE—TWO FORMS OF ANÆMIA.—Mrs. R., aged thirty years, married, labors under great exhaustion, with a yellowish pallor of countenance and incipient anasarca, together with other general symptoms characterizing an anæmic condition of the economy. “How long, madam, since your health begun to decline?” “I have been gradually losing my health, sir, for the past three months.” “Previous to that time what was the state of your health?” “It was very good, sir; I had no reason to complain, and I could attend to my work without any trouble.” “Do you know, my good woman, what caused your health to give way three months ago?” “I had, sir, at that time a miscarriage, and I flooded so much I thought I would have died.” “After the flooding, had you much headache?” “Yes, sir, I was almost distracted with my head, and they said my brain was inflamed.” “Did the light affect you, and increase your headache?” “Yes, sir, I was obliged to keep my room dark, I suffered

so much from the light." "When did your limbs begin to swell?" "About six weeks after my miscarriage, sir." "Are you much troubled with dizziness and palpitation of the heart?" "Yes, sir, I have swimming in my head, and a great deal of beating about my heart."

The case before you, gentlemen, is one of great interest for several reasons, and presents two or three features which are full of practical import. There is no doubt that this patient is laboring under *anæmia*—a term derived from two Greek words—*α*, privative, and *αἷμα*, blood—which mean literally a deficient quantity of the circulating fluid, or a bloodless condition of system. You will observe that this woman whose health is now so feeble, dates her sufferings, and very truly so, from a miscarriage which occurred three months since, accompanied with profuse loss of blood. The unusual loss of blood is undoubtedly the original source of her present troubles, and will fully explain the various morbid phenomena which are so distinctly marked in her case, viz.: 1st. The great exhaustion; 2d. The intense headache, with intolerance of light; 3d. The icterode pallor of countenance; 4th. The vertigo and palpitation of the heart; 5th. The incipient anasarca. Allow me here, for the instant, to dwell with special emphasis on one of these phenomena resulting from loss of blood—I mean *the headache, with intolerance of light*. It is a feature connected with exhausting hemorrhages in every way worthy of your consideration. An error in diagnosis on this subject will be at too heavy a cost, and you must, therefore, exercise in such cases a careful judgment, in order that the truth may be developed. This woman informs us that one of her prominent troubles was intense pain in the head, with intolerance of light. These are two of the symptoms of inflammation of the brain, and you have heard the statement that, in her case, these symptoms were referred to inflammation of that organ. This is a very common mistake in practice, and coupled with it is another, that of confounding the palpitation, the simple result of loss of blood, with the palpitation the effect of organic disease of the heart. You see, therefore, in the case before us another exemplification of the fact, to which your attention has been so often directed, that symptoms without their defined measure of value are false lights, and frequently tend, so far as the application of remedies is concerned, to disastrous results.

If, through an erroneous diagnosis, this patient had been treated for *phrenitis*, she would have died by the very hand that was raised to save her! Nothing is more common than this intense headache and palpitation of the heart in puerperal women, who have suffered from severe hemorrhages. These two symptoms will yield as soon as the waste is repaired, and they require, therefore, tonic instead of depleting remedies. Let us now turn to another feature in this case, and see whether we can satisfactorily explain its true origin—the *incipient anasarca*. A few years since the doctrine prevailed that certain forms of dropsy were traceable to an impoverished condition of the blood. This, however,

was too general and vague ; there was an absence of application about it so essential to the practitioner in his just appreciation of morbid action. An impoverished condition of the blood may mean too much, or it may mean too little, depending upon the particular interpretation which may be given to it, and under no circumstances, without a more precise understanding of the term, can it lead to salutary results either in diagnosis or treatment. Andral, in his admirable essay on "Hæmatology," very significantly remarks that the blood may become impoverished by the loss of its due quantity of fibrin, red globules, or albumen. In either of these three cases the blood will have lost its richness.

But, he adds, does each of these conditions lead to dropsical effusions ? The answer to this question is, that the diminution either of the fibrin or red globules of the blood does not necessarily induce dropsy ; and, moreover, when serous effusions occur simultaneously with the loss of either of these elements, they do so as exceptions, and may be ascribed to other circumstances. The true impoverishment of the blood, which leads to dropsy is that condition of the fluid, in which it is deprived of its *albumen*. This was the opinion advanced by Andral ; but, perhaps, he did not go far enough, for he maintained that the blood could be deprived of its albumen only through the kidney ; or in other words, as a consequence of *albuminuria*. The fact that the albumen of the blood becomes diminished in dropsies following Bright's disease of the kidney had previously been ascertained by Christison, Burrows, and others. It was, however, left for Becquerel and Rodier not only to confirm the views of Andral as to the connection between certain forms of dropsy and the loss of albumen in the blood, but they also, if their researches should be sustained by future observation, have shown that this diminution of albumen may occur irrespectively of *albuminuria*.*

* In their memoir presented to the Academy of Medicine in 1850, they offer the following as the results of their investigation on this subject :

1st. In the same manner that there exists an anæmia through a diminution of the red globules, we ought also to admit a peculiar pathological state characterized by a diminution of the albumen.

2d. This diminution of albumen may be produced in a rapid manner, and is then accompanied with pallor, icterode hue of the face, great debility, and especially *anasarca*, without *albuminuria*.

3d. A large number of acute dropsies, still regarded as essential, should manifestly be attributed to this pathological state.

4th. The diminution of albumen in the blood may develop itself slowly ; it then constitutes a chronic pathological condition, characterized by particular symptoms, such as pallor, with an icterode color of the face, extreme debility ; and finally, general dropsy more or less intense, without *albuminuria*.

5th. The greater part of the dropsies, formerly regarded as essential and passive, belong to the preceding class.

6th. The diminution of albumen in the blood is completely independent of the numerical amount of the red globules. These two alterations in the blood, however,

The conclusions arrived at by Becquerel and Rodier are but additional evidences of sound progress, and they give strength to the language I used to you some time since "that physiology and chemistry are fast revealing a new basis for the treatment of disease—thought is now in the right direction, and a bright future is at hand. In less than ten years, therapeutics will have received a new character—the practice of medicine will be more certain, because its principles, through the investigations of the chemist and physiologist, will have become consecrated as so many unerring developments of truth." If the researches of these observers prove any thing, they prove a very substantial and important fact, viz.: that there are two forms of *anæmia*, one dependent on the loss of red-globules in the blood, as in chlorosis; the other dependent on the loss of albumen, such, for example as in the exhaustion following profuse sanguineous losses, an impoverished diet, etc. In order that you may fully appreciate the importance of a just distinction between these two forms, if I may so call them, of *blood-lessness*, it is only necessary to observe that, without this distinction, you can have no rational hope of applying the appropriate remedy. If you desire the proof of this, it will be afforded you in the essential truth that in the *anæmia* resulting from the loss of red globules, iron is the remedy. In the *anæmia*, on the contrary, dependent on the loss of albumen, iron has no remedial effect whatever. Again, in chlorosis, quinine is a perfectly negative remedy—while, in the other form of *anæmia*, it is heroic in its results.

Treatment.—The practical inference to be deduced from the remarks we have made in reference to the different pathological conditions connected with these two characters of *anæmia* is simply this: that their successful treatment must necessarily depend upon an accurate diagnosis, and a due consideration of the causes. In the case before us, for instance, there can be no doubt as to the starting-point of the derangement

exist very often together, and it is sometimes the one, and sometimes the other, which predominates.

7th. The diminution of the red globules is altogether incapable of producing dropsy, unless there be at the same time a loss of albumen.

8th. The causes capable of producing a diminution of albumen are insufficient food, profuse sanguineous losses, protracted diarrhoea, paludal poison, etc.

9th. The same effects are produced under the influence of organic diseases, such as an affection of the heart, Bright's disease of the kidney, constituting a veritable cachexy.

10th. The pathological state to which in general is given the name cachexy, is nothing else than a combination of symptoms, which result from a diminution of albumen connected or not with a certain loss of the red globules. The first of these causes explains those dropsies which are so frequent, accompanied with discoloration of the skin, and the profound exhaustion of the patient. The second explains the cardiac and vascular *bruits de souffle*, the dyspnoea, palpitation, etc.

11th. The preceding distinctions exercise a great influence and should be well considered in the diagnosis, prognosis, and treatment of these dropsies.

under which this patient labors—it was the profuse hemorrhage consequent upon the miscarriage; and the anasarca is the effect of the loss of albumen in the blood consequent on the hemorrhage. The effusion here is not of the acute form; it is, on the contrary, chronic and asthenic. The obvious indication is to remove this tendency to general dropsy by doing all that science will enable us to accomplish with a view of restoring to the blood its lost albumen. With this object, therefore, I shall recommend the following course to be pursued:

R	Sulphat. Quinæ	.	.	.	.	.	.	3 ss
	Pulv. Rhei	.	.	.	.	.	.	3j
<i>Divide in chartulas xxx.</i>								

One of the powders to be taken thrice a day; the diet to be nutritious, consisting of animal broths and succulent meats, with half a pint of porter daily; to which should be added pure country air, and exercise without fatigue.

The chronic dropsies, which are so frequently observed to accompany wasting diseases, such as carcinoma of the uterus, etc., and which are also often consequent upon undue lactation, may be classed under that form of anæmia, which results from a loss of albumen in the blood. How else are we to account for these affections, especially in cases in which there is no obstruction to the circulation either from the pressure of tumors, disease of the heart, liver, etc.?

FREQUENT DESIRE TO PASS WATER IN A MARRIED WOMAN, TWENTY-SEVEN YEARS OF AGE.—Mrs. O., aged twenty-seven years, married, the mother of three children, the youngest four months old, complains of much uneasiness about the bladder, and says she feels the necessity of passing water as often as twenty times during the day and night, but is able to evacuate only a small quantity at each time. “How long, madam, have you suffered from this irritation of the bladder?” “I have been troubled with it, sir, ever since the birth of my last child.” “Was your last labor a difficult one?” “Yes, sir; I was in labor for four days, and suffered very much.”

This case, gentlemen, is one of interest, and happily one which is within the control of remedies. It is an affection of extreme annoyance, and when you encounter it in practice, it will be your duty, before attempting any treatment, to ascertain its true cause and nature. Irritation of the bladder will arise from various conditions of the system, and hence the necessity of an accurate judgment. I have examined this patient *per vaginam*, and, on pressing my finger gently against the neck of the bladder, and along the course of the urethra, I find there is much tenderness, accompanied with a muco-purulent discharge from the urethra. From these facts it is manifest that the frequent desire to pass water is the result of inflammation of the urethra and neck of the bladder; and I

have no doubt that the inflammation of these parts has been produced by the severity of the labor. It is not, in cases of difficult parturition, unusual for the patient to experience trouble about the bladder, such as incontinence of urine from partial or complete paralysis of the sphincter, a frequent desire to micturate from irritation, inflammation, etc.

Treatment.—One syringe-full of the following injection should be thrown into the urethra once in two or three days, and repeated at this interval as often as may be necessary :

R	Nitrat. Argenti	℥j
	Aquæ distillat.	℥iv
		<i>℥i sol.</i>

You need have no apprehension as to the use of the *nitrat. argenti* in these cases—I often have recourse to it, and with decided benefit. In addition to the injection, the patient should put the contents of one of the following papers into half a pint of boiling water; let an infusion be made, and the half pint should be taken cold in divided doses during the day :

R	Fol. Diosma Crinat.	3 xx
		<i>Divide in chartulas x.</i>

HYSTERIA FROM DEFECTIVE MENSTRUATION IN A WIDOW WOMAN, AGED TWENTY-NINE YEARS, THE MOTHER OF TWO CHILDREN.* Mrs. M., widow aged twenty-nine years, the mother of two children, the youngest six years old, returned to-day, and reported herself much improved in health. This case, gentlemen, you will remember, was one of hysteria, which we attributed to defective menstruation. The hysteric paroxysms we regarded merely as results, and directed our attention, in the treatment, to the restoration of the menstrual function to its normal standard. The patient was regular as to time, but defective as to quantity. If you will turn to your note-books, you will see what was said, and the treatment ordered when this case was first presented here. “You say, my good woman, you are improved in health?” “Yes, sir.” “Be pleased to tell us in what particular you are better.” “My monthly turns, sir, are quite regular now in all respects, and my nervous attacks have almost entirely left me.” “I am glad to hear it. Good morning, madam.”

SYMPTOMATIC COUGH IN A CHILD EIGHTEEN MONTHS OF AGE.—Sarah R., aged eighteen months, is reported by her mother cured. When this little patient was brought here, the mother was in great distress for fear her child was in consumption. I called your attention particularly to the subject of cough, and reminded you that children are frequently affected with what is called *symptomatic cough*, the causes of which are worms, constipation, dentition, etc. In the case of this little patient, our

* Page 368.

opinion was that the cough was due to the irritation of worms, and the following treatment was ordered :

℞	Fol. Spigeliæ Mariland	℥ ss
	Fol. Sennæ	℥ ss
	Aquæ Bullient	℥ vj
	<i>Ft. Infus.</i>	

A table-spoonful twice a day, until all is taken, followed by

℞	Sub. Mur. Hydrarg.	gr. ij
---	----------------------------	--------

With ℥ ij of castor oil the ensuing morning. The diet to be of the blandest kind. Should any worms be expelled, the child to be placed on a gentle tonic, such, for example, as the following :

℞	Sulphat. Quinæ	gr. ij
	Acid. Sulph. dilut.	gtt. ij
	Syrup Zingiberi	℥ ij

A tea-spoonful twice a day.

"Did any worms pass from your child, madam?" "Yes, sir, it passed four after it took the calomel powder." "How is its cough?" "The cough has left it, sir."

SUPPRESSION OF THE MENSES IN A MARRIED WOMAN, THIRTY-ONE YEARS OF AGE, OF NINE YEARS' DURATION, FROM CHRONIC INFLAMMATION OF THE UTERUS—THE EMMENAGOGUE PROPERTIES OF MERCURY.—Mrs. M., married, aged thirty-one years, no children, has labored under suppression of the menses for the past nine years. "Do you know, my good woman, what caused your courses in the first instance to become suppressed?" "I think, sir, it was a cold I took." "Cold, madam, is a very common cause of this affection. You are certain that you have not had your turns for the last nine years?" "Yes, sir." "Have you felt much uneasiness about your hips?" "Yes, sir, and I have suffered a great deal of pain about my womb." The case before you, gentlemen, is one of chronic suppression of the menses, and it is well worthy of attention. These are the cases which so often bid defiance to remedies, and lead to a gradual decay of the system. This patient, in addition to the suppression, is also affected with chronic inflammation of the uterus. The tissues of the uterus are evidently thickened, and the organ is enlarged. You have seen in this Clinique a numerous variety of suppressed menstruation, and you have also seen the cases yield to appropriate treatment. In the present instance, it appears to me, we possess a remedy which is admirably adapted to restore this woman to health—it is, in this particular form of suppression, one of the most certain and effectual emmenagogues—I mean mercury. I can speak with great confidence of this medicine—it has often served me when all else has failed.

As a deobstruent, mercury enjoys an excellence above all other remedies, and it is to this particular virtue that we are to ascribe its extraordinary powers in overcoming long-standing menstrual suppression,

with which there is almost always associated chronic inflammation or congestion of the uterus. The great object to be attained in the administration of mercury in these cases, is its gradual but positive influence on the system. Ptyalism must be effected, and though it is not desirable that excessive mercurial action should take place, yet it is absolutely essential that the system should be under its influence for at least three or four months. It is in this way only that we can hope to see exemplified its great efficacy as a remedy in chronic suppression. There is, I am aware, a strong popular prejudice against the use of mercury—and the prejudice has sprung from the frequent abuse of this potent medicine. I do not speak of mercury as prescribed by the charlatan—I speak of it, on the contrary, as a remedy in the hands of the skillful physician who comprehends its power for doing injury, and understands its influence in controlling morbid action. Take mercury from the *materia medica*, and how feeble would be our means of subduing inflammation, especially of the chronic type, and how restricted our resources! There are, however, certain conditions of system, which contra-indicate the administration of mercurial preparations; such as scrofulous diathesis, inflammatory affections accompanied with exhaustion, nervous irritability, etc. In these cases mercury, generally speaking, would do harm, and should, therefore, be avoided. It is desirable, when salivation is contemplated, to conjoin opium with the mercury, for the reason that it will be more likely to be retained in the system, and, therefore, its full effects more certain. The various preparations employed are calomel, blue pill, hydrarg. c. creta, etc. Calomel, perhaps, is more reliable as well as more certain in its action. We shall order the following prescription:

R	Submur. Hydrarg.	.	.	.	.	.	gr. xxiv
	Pulv. Opii	.	.	.	.	.	gr. iv
							<i>Ft. Massa in pil. xij div.</i>

Let one pill be taken night and morning until ptyalism is produced; and in order that the action of the mercury may be continued, one pill should afterward be given at intervals of four or five days, as circumstances may require. Mercurial inunction is sometimes resorted to in these cases, but I think the internal administration of the medicine preferable.

INVERSION OF THE MUCOUS MEMBRANE OF THE URETHRA IN A MARRIED WOMAN, AGED FORTY YEARS, THE MOTHER OF SEVEN CHILDREN.—Mrs. P., aged forty years, married, the mother of seven children, the youngest four years of age, complains of a difficulty in passing water, with which she has been more or less troubled for the last three years. "What is the nature of the difficulty of which you complain, my good woman; is it that you can not retain your water?" "Oh! no, sir; my difficulty seems to be an obstruction at the outer passage; there is a small swelling there, which gives me much trouble sometimes, and seems to prevent

the flow of water." "Does the swelling cause you any pain?" "No, sir; except sometimes when I walk it feels irritated." This case, gentlemen, is a peculiar one, and for those of you who have never seen an example of the kind, it will present more than usual interest. I have had frequent occasion to allude to the causes of difficult micturition, but I do not recollect that a case of this particular character has before presented itself at the Clinique, although it can not be considered one of extreme rarity. You would, I judge, be somewhat perplexed to form a correct opinion of the disease before us without some additional *data* beyond the mere statement which you have heard from this patient. Before introducing her here, I examined with much care the condition of the urethra, and I have discovered the cause of her difficulty to consist in a prolapsion, or perhaps, more properly speaking, an inversion of the mucous lining of that passage; and I have also ascertained another interesting circumstance, viz., that the inverted mucous surface is ulcerated, the consequence, no doubt, of friction of the dress. This condition of the urethra is sometimes the result of protracted and severe labors; and sometimes, too, you will find it connected with a dilapidated constitution, where the tissues are in a state of general relaxation. The particular condition of this urethra might possibly be confounded with another form of disease to which this passage is liable, and several examples of which you have seen in the Clinique—I mean "*the bloody tumor of the meatus urinarius*." But the distinction between these two affections is so simple that error in diagnosis can not be justified. In the latter disease, as you know, there are usually three characteristic symptoms: 1st. Excessive sensibility; 2d. Extreme scarlet redness; 3d. Bleeding on injury. All these symptoms are absent in the present case.

Treatment.—In recent cases of inversion of the urethra, you will often succeed in remedying the difficulty by well-directed and persevering pressure through the agency of bougies, together with the free use of cold ablutions. In the present instance I despair of success by such means. Before, however, attempting any remedy for the inversion, the first object of attention is the healing of the ulceration; this can readily be accomplished by the occasional application (two or three will probably suffice) of the nitrate of silver in solution, say ʒss to ʒj of water. After the ulceration is removed, the remedy for a permanent cure in this case, is the excision of the projecting fold of membrane. There is no danger in the operation, and it is one that is perfectly justifiable under the circumstances. [Here the patient was placed on the bed, and the Professor, with a camel's hair pencil, freely touched the ulcerated surface with the solution.] "Return here next Monday, my good woman, and I will do what is proper for you." "Thank you, sir, I shall." In addition to the local treatment, this patient will need some constitutional remedies: her health, as you perceive, is bad, and she requires invigoration. "How are your bowels, my good woman?" "They

are very much confined, sir." "Are your courses regular?" "No, sir, they are very scanty." Let the following prescription be ordered:

R	Pulv. Rhei	}	. . . . .	āā 3 ij
	Carbonat. Magnesiae			
	Aromat. Confect.		. . . . .	3 iss
	Infus Rhei	}	. . . . .	āā 3 iv
	Aq. Cinnamoni			

℞. M.

A wine-glass early in the morning as circumstances may indicate. In addition to the above, it would be judicious, I think, for this patient to take, for two or three successive nights, just previous to the menstrual period, 3j of tinct. aloes co. Her diet should be nutritious, and after the bowels have become regulated, she may substitute for the above mixture, the following:

R	Sulphat. Ferri	. . . . .	℞j
	Extract Gentianae	. . . . .	℞ij

Divide in pil. xx

One pill twice a day.

SEROUS INFILTRATION OF THE LABIA EXTERNA, IN A MARRIED WOMAN, AGED TWENTY-SEVEN YEARS, SIX MONTHS PREGNANT.—MRS. P., married, aged twenty-seven years, six months in gestation, seeks advice for a large swelling in the lower part of her person. "How long, my good woman, have you been married?" "Two years, sir." "Is this your first pregnancy?" "Yes, sir." "How long have you been troubled with this swelling of which you speak?" "About one month, sir, but lately it has increased so much, that it gives me great uneasiness." "Do you swell in your feet and legs?" "Oh, yes, sir, my feet are more than twice their usual size. [Here the patient was placed on the bed, and, after an examination, the Professor pronounced the swelling a serous infiltration of the labia majora.]

This, gentlemen, is a case of much practical interest. The patient before you is in her sixth month of pregnancy; her lower extremities are marked by extreme œdema, which is often the accompaniment of gestation from pressure on the lymphatic vessels by the distended uterus; and you also perceive that the œdema has extended to the *labia majora*, enlarging each one of them to the size of an ordinary foetal head. The labia majora are liable to distension from several causes: 1st. Abscess; 2d. Sanguineous engorgement; 3d. Serous infiltration; 4th. Hernial protrusion; 5th. Aneurismal cysts; 6th. Varicose veins, etc.; and you can not, therefore, exercise, in such cases, too much caution in endeavoring to ascertain the true cause of the enlargement. The labia are abundantly supplied with cellular tissue, and consequently are predisposed to accumulations of serum, whether connected with a general hydropic diathesis, or simply the result of transitory or accidental influences. Occasionally, only one labium is affected, but most usually both will become the seats of distension. One of the first points of

inquiry in this form of infiltration is, whether the serous accumulation be due to ordinary dropsy, or merely the effect of some mechanical or temporary cause. It is very manifest from an examination of the case, that this patient is not affected with ascites, though she is evidently anasarcaous—the sub-cutaneous cellular tissue being more or less infiltrated. The patient needs relief, and the question is, what can be done for her?

Treatment.—In cases like these, much will be gained by position. As far as possible, the recumbent posture should be maintained, the hips elevated, and the head and shoulders as low as convenient. This will tend to diminish the volume of the labia; and for the general infiltration much benefit will be derived from the following:

R	Submur. Hydrarg.	.	.	.	.	.	gr. vj
	Pulv. Digitalis	.	.	.	.	.	gr. ij
							<i>Div. in chart. ij</i>

One of the powders at night, followed in the morning by $\frac{3}{4}$ ss of sulphate of magnesia in half a tumbler of water.

It will sometimes be necessary, from excessive distension, to evacuate the fluid in the labia by puncture. There is, I am aware, objection urged against this practice on the ground that incisions here are apt to become serious through erysipelatous and other forms of inflammation. I do not think these objections well founded as a general principle, and should, therefore, not hesitate when indicated to resort to incisions as a mode of relief. But a short time since, Dr. Martin, of Kentucky, one of the students in this university, was intrusted by me with a case of midwifery. In the course of the day, he requested me to see the case with him. I found the labia externa enormously distended, so much so that it was impossible to make a vaginal examination. Without any delay, I freely punctured both labia; more than a quart of fluid was evacuated. The patient was delivered in about twelve hours afterward by Dr. Martin. Her recovery was prompt, and she and her infant are in the enjoyment of good health.

PARTIAL PARAPLEGIA IN A MARRIED WOMAN, AGED THIRTY-TWO YEARS, FROM INSTRUMENTAL DELIVERY.* Mrs. W., married, the mother of one child, ten months old, says she feels more power in her lower limbs and finds she can walk with much more ease than she has been able to do since the birth of her infant. This case, gentlemen, when it was first presented here, I discussed very fully. This woman was delivered with instruments, and the result was a partial loss of power over the lower limbs. She was treated with strychnia, which, you know, is the active principle of nux vomica, and which exercises a specific influence on the spinal cord, this influence being more marked on the motor nerves than on those of sensation. One of the following pills was ordered to be taken twice a day:

R	Strychniæ	.	.	.	.	.	gr. ij
	Confect. Rosarum	.	.	.	.	.	q. s.
							<i>Ut ft. pil. xxiv.</i>

* Page 326.

LECTURE XXIII.

Leucorrhœa—What does it mean?—Non-sanguineous Vaginal Discharge.—Congestive Dysmenorrhœa in a Girl, twenty Years of age.—Varieties of Dysmenorrhœa.—Facial Hemiplegia in an Infant, ten Days old, from Instrumental Delivery.—Abscess in the Neck of a Child, two Years old.—Venereal Chancres in a Woman, twenty-four Years of age.—Gestation six Months advanced, complicated with Pthisis Pulmonalis, in a married Woman, aged twenty-four Years.—Does Pregnancy exercise any influence in controlling either the Development or Progress of Pthisis Pulmonalis?—Granular Vaginitis in a married Woman, aged twenty-four Years, accompanied with a thick, creamy discharge.—Excessive Purging and Convulsions in an Infant, one Month old, produced by the Mother's Milk.—Cathartic Properties of the Colostrum.—Hypertrophy of the Nymphæ, in an unmarried Woman, aged twenty-seven Years, from Syphilitic Disease.—Congenital Enlargement of the Nymphæ among the Boschisman Women.—Dysmenorrhœa in a married Woman, from Stricture of the Neck of the Womb.

GENTLEMEN.—There is, perhaps, no term in the entire nomenclature of disease more generally undefined than that of leucorrhœa. It is employed to denote a discharge from the vagina, and no matter what its character may be, provided it does not consist of blood, it is designated as a leucorrhœal discharge. With this general acception of the term, and without any fixed views of the various morbid conditions which may give rise to the different non-sanguineous discharges, it is not surprising that the practitioner should be so often baffled, and discredit so often brought on our science. Just distinctions are as much needed in our profession as they are in the other affairs of life; and we should remember that accurate conclusions are the logical results of correct premises. Leucorrhœa is rarely an idiopathic affection; it is usually dependent upon its antecedent, and, therefore, it may be properly considered as an effect or symptom. If this be true, I need not point out to you the absurdity of always treating it as an essential malady. Your own good judgments will at once tell you that the indispensable element of successful treatment is, in the first place, to ascertain the cause to which the leucorrhœal discharge is traceable, and, secondly, to apply those remedies best calculated for its removal. And again, be careful that you do not hastily confound an increased normal secretion of mucus with one that is the direct result of disease. Pregnant women are almost always affected with a dis-

charge of mucus from the vagina—this discharge is sometimes profuse, especially in the latter period of gestation. An interesting question here arises—Is there any connection between this increased mucous secretion and pregnancy; and if so, is it in accordance with the natural laws of the system, or is it in conflict with those laws, and, consequently, a result calling for the interposition of the practitioner?

It is only necessary to reflect, for a moment, on the extraordinary modifications which the genital organs of the pregnant female undergo before the birth of her child, in order to appreciate the value of a more or less constant secretion of mucus, which tends to lubricate and prepare them for the distention necessary to the passage of the fœtus. But we are called upon to do more than appreciate the value of this secretion under these circumstances—we must acknowledge its necessity. The presence, then, of a mucous secretion in the vagina of the pregnant woman is not only useful, it is also necessary; and, therefore, it is one of those conservative acts which nature usually accomplishes, and which results advantageously, if not contravened by officiousness. What estimate should you place on the sagacity of a physician who, regarding this mucous secretion as a morbid phenomenon, should have recourse to remedies for the purpose of arresting it? He would not only be faithless to his duty, but, by such ignorance, he would place in more or less peril the lives of both mother and child. The mucus which accompanies pregnancy, and which is intended to prepare the parts for their ultimate distention, is secreted by the follicles found on the lips of the os uteri. These follicles begin to enlarge soon after impregnation, and, before the close of the period, they become considerably developed. Here, then, is an example of what some practitioners denominate leucorrhœa, occurring under circumstances perfectly in unison with the laws of the organism; or, in other words, a leucorrhœa which is not only consistent with health, but the undisturbed integrity of which is absolutely necessary to the maintenance of harmony in the system.

The sudden arrest of this secretion, through officious medication, would, as I have already remarked, subject both the mother and fœtus to serious hazard—the former by the suspension of a natural discharge, the latter by protracted labor consequent upon the greater difficulty, through this suspension, of distending the parts for the exit of the fœtus. You are not, however, to understand me to say that pregnant women always enjoy an immunity from leucorrhœa, the result of disease. You will, on the contrary, find in the course of your professional observation, numerous instances in which the mucous secretion natural to pregnancy will be, to a greater or less extent, modified by a leucorrhœa consequent upon some morbid influence. It will become, in such cases, your duty to ascertain the cause of the leucorrhœa, and make a distinction between the discharge which is normal, and that which is morbid. In a word, this latter precept must be faithfully observed by the medical man in

reference to the point now under discussion; and, to make it still more palpable, I place the question before you thus: If a patient have a non-sanguineous discharge from her vagina, it will possess one of two characters—it will either be healthy or morbid. If the former, it does not fall under the supervision of the practitioner; if the latter, his first duty will be, by proper investigation, to trace it to its source.

The term leucorrhœa is derived from two Greek words—*λευκος*, albus, *ῥέω*, fluo, literally meaning a white discharge; and hence it has been described under a variety of names, such, for example, as “whites,” “female weakness,” “fluor albus,” “fluor muliebris,” “fleurs blanches,” etc. These names have not only given rise to much confusion, but they have led to false practice. The diseases peculiar to women are numerous, embracing an extended variety; but mark what I tell you, you will be more frequently consulted in reference to vaginal discharges than for any other ailment to which the female is liable; and I will even go further, and state that in nine instances out of ten the patient will describe her case as one of “whites” or “female weakness.” In popular phraseology, these two terms are synonymous, possessing precisely the same import, viz.: a non-sanguineous discharge from the vagina. With this partial view of its pathology, leucorrhœa has been too frequently treated upon routine principles, and consequently not only without success, but with positive injury to the profession. It is, therefore, with the hope of guarding you against this contracted view of one of the most frequent morbid phenomena connected with the female economy that the thought has suggested itself of presenting in a very general manner some considerations on the subject of leucorrhœa.

The speculum and the “toucher” have afforded the men of our own times ample opportunity for the examination of this interesting subject, and it is unfortunate that, with these opportunities, such ignorance should still prevail in reference both to the varied nature of leucorrhœa and its rational treatment. The non-sanguineous discharges from the vagina are as follow: Mucus, purulent, muco-purulent, and watery. For a secretion of mucus inflammatory action is not necessary. This fluid we know is secreted in health; it is one of the ordinary and constant functions of the economy. Not so, however, when the discharge is purulent. The presence of pus necessarily pre-supposes the existence of inflammation, and whenever there is a secretion of this material, there certainly must have been inflammation of a type more or less grave. Again, the natural secretion of mucus may be increased by irritation, and this may be the result of primary action on the mucous surface, or it may emanate from nervous disturbance, constituting that form of leucorrhœa so well described by Dr. Mitchell, of Dublin, examples of which you have seen in the Clinique. I have elsewhere denominated this the “nervous non-sanguineous discharge.” The term I think a good one, for it at once directs the mind to the appropriate treatment, viz.: applications to the

spine either of the red-hot iron, blisters, cauterization, issues, etc. The watery discharge, in which occasionally the leucorrhœa consists, is usually a result of irritation of the mucous surface either of the vagina or uterus, and sometimes of both. This is an important fact, gentlemen, for you to remember. I have on other occasions called your attention to the subject of watery discharges from the vagina, and you will remember that I told you they may be produced by cauliflower excrescence, uterine hydatids, incontinence of urine, vesico-vaginal fistula, and by irritation of the mucous surface of the uterus or vagina.

Leucorrhœa, so far as its seat is concerned, may be divided into uterine and vaginal. In the former the secretion, whatever may be its nature, comes from the uterus; in the latter, from the vagina. It is of much importance in practice to distinguish between the discharge which proceeds from the vagina, and that which is derived directly from the uterus. This subject has been studied by Dr. Reclam, and he has arrived at the following results: When the secretion proceeds from the uterus, it is thick and gelatinous, adheres to the finger, and exhibits, under the microscope, numerous mucous globules. The vaginal secretion, on the contrary, is more opaque and fluid; it is white, except during the menstrual flow, and creamy. The microscope detects a quantity of epithelial cells, etc.

You have seen in the Clinique examples of leucorrhœa occurring in the young infant, in the girl before the period of puberty, and in the female after the final cessation of the menses. It is also sometimes observed just before the menstrual period, and it occasionally becomes, as it were, a substitute for the ordinary menstrual fluid, and in such case the discharge has been called the *menstrua alba*. It is not uncommon to observe, as the menses are about to decline permanently, a secretion of mucus more or less profuse from the vagina. Under these circumstances, you must be careful not rashly to arrest this discharge, for it often acts as a waste-gate, and protects the system against that disturbance which sometimes follows the final suspension of the menstrual function. The causes of leucorrhœa are extremely numerous, and, as I have already remarked, the character of the discharge will be very much modified according to the particular influence which produces it. If you then desire to treat this affection successfully, it will be absolutely necessary for you to comprehend the true origin and nature of the discharge. With a view, therefore, of simplifying the subject, instead of leucorrhœa, I propose the term *non-sanguineous vaginal discharge*. This latter term, it occurs to me, will prevent much embarrassment. It will do away with that prevailing error of regarding any discharge which is not one of blood as leucorrhœa, and consequently it will lead to scientific and rational treatment. If a female apply to you for advice, and says she has the "whites," the "female weakness," or "leucorrhœa," you can very safely rely that the discharge with which she is affected is not san-

guineous, for women never employ the term "whites," etc., in this latter case. You have arrived at one important fact, viz., that your patient has a non-sanguineous discharge, and it may be mucus, muco-purulent, purulent, or watery. But each of these may be produced by various causes. It follows, therefore, that you have only progressed a part of your way, and before suggesting any remedies, it will be necessary for you, by a diligent examination, to ascertain, in the first place, whether the discharge be exclusively mucous, and if so, whether it be normal or the effect of disease; and secondly, if it be not mucous, you must define its character, and then refer it to its proper cause. The change of name which I propose will, I think, serve you at the bed-side. I shall not, on this occasion, enumerate the various causes of the *non-sanguineous vaginal discharges*. They have been frequently mentioned to you, and you will find them under their appropriate heads when treating of this particular affection.

CONGESTIVE DYSMENORRHOEA IN A GIRL TWENTY YEARS OF AGE—VARIETIES OF DYSMENORRHOEA.—Jane L., aged twenty years, unmarried, suffers at her monthly turns very severe pain. She has every apparent indication of robust health; her menses have always been regular until within the last year. About fourteen months ago she took cold, and since that time her "turns" have continued on her only two days at each period; they have been accompanied with excruciating pain, so much so that during her paroxysms of suffering she shrieks, and almost loses her senses. "Do you notice, madam, what passes from your daughter; does it look like blood?" "No, sir; it comes away from her in shreds and patches." "Does she complain much of sick-stomach?" "Yes, sir; she always knows when her turns are coming on, because, one or two days before, she vomits." "How long does the vomiting continue on her?" "Sometimes two or three days, sir." "Does she complain of bearing-down pains at the time?" "Yes, sir; she says she feels a great weight pressing down, and she has fever and headache."

The case before you, gentlemen, is one of much practical import. The disease with which this young girl is affected is by no means uncommon; it is one of extreme annoyance, from the pain and other derangements which accompany it, and it is, therefore, necessary that you should be accurate in your judgment as to its true nature. Women, both married and unmarried, often suffer from this affection for years; frequently they obtain no relief, and, after a long season of distress, the disease degenerates into some serious, if not malignant malady. The affection to which I allude is dysmenorrhœa, or, as it is called, painful menstruation. It is sometimes described in the books under the terms "*menstruatio difficilis*," "*menstrues laborieuses*," etc. One of the prominent errors, in my opinion, in the management of this affection, is, that the practitioner is too prone to regard merely the pain which, it must be admitted, is a leading

symptom, but by no means a safe indication as to the mode of treatment. I have frequently reminded you that the menstrual function is one of the most important, in its general influence, in the economy of the female; it can not undergo derangement without, to a greater or less extent, involving the general constitution. When this function is perfectly normal, it commences and terminates without subjecting the system to any disquietude, being attended with little or no inconvenience. But how different in dysmenorrhœa, which is the result of a morbid state of the uterine organs, and which requires the scrutinizing vigilance of the medical man? While, however, painful menstruation is the effect of morbid action, you are not to forget that this morbid action is not uniform; it presents numerous varieties, constituting so many different phases of this particular form of menstrual aberration. This is the point for you constantly to bear in memory when summoned to a case of the kind. In a word, the pain of dysmenorrhœa is simply a result, and is always present in this species of abnormal menstrual function. To the popular mind, it is the engrossing symptom; but from you the pain will receive no more consideration than it is entitled to, and you will measure its importance by the particular cause to which it owes its origin.

The following, I think, will embrace the several varieties of dysmenorrhœa: 1st. Dysmenorrhœa from congestion; 2d. From excessive nervous susceptibility; 3d. From organic disease of the uterus, such as ulceration, polypoid growths, etc.; 4th. From sudden suppression, the result of cold, fright, etc.; 5th. From secondary syphilis through its influence on the mucous surface of the uterus; 6th. From stricture of the cervix uteri. The attention of the profession was first called to this latter type of dysmenorrhœa by Dr. Mackintosh, of Edinburgh. The remedy suggested by him is altogether mechanical, consisting in the introduction of the bougie for the purpose of dilating the stricture. This remedy, in judicious hands, is usually followed by the happiest results; but, like chloroform, and many other valuable agents, it has been sadly abused. If the above classification of the various forms of dysmenorrhœa be correct—and its accuracy you will recognize at the bed-side—it follows, as a necessary consequence, that a partial or abstract view of this affection will only lead to a false diagnosis, and empirical treatment. In order to bring your minds to a clear and practical appreciation of the point at which I am aiming, let us suppose that this girl, who is evidently laboring under dysmenorrhœa, should apply to one of you for advice. You could do nothing for her without first comprehending the particular cause to which her painful menstruation is traceable. Your duty, then, before suggesting any remedy, would be thoroughly to investigate the true nature of her malady. Having ascertained this, the proper therapeutic application would be easily deduced.

Allow me to inquire whether there is any evidence before us which will justify an opinion as to the positive character of the dysmenorrhœa

in this case? I think there is just that amount of testimony which covers the whole ground, and presents all the data necessary for a correct opinion. When this girl stated the difficulties under which she had labored, I immediately suspected the cause of her trouble, and hence the nature of the questions addressed to the mother. When the latter remarked to me that, instead of blood, she noticed shreds or patches, my suspicions were much strengthened; further and important evidence was furnished by the statement that, at each period, her daughter suffered as much pain as a woman in labor. If to this be added the fact that the girl is plethoric, with red cheeks, and all the external appearances of vigorous health, complaining, too, of bearing-down pain, together with sick-stomach, headache, and fever at the time of the menstrual crisis, it appears to me that no doubt can exist as to the particular variety of dysmenorrhœa with which the patient before us is affected. It is beyond peradventure the congestive type.

In congestive dysmenorrhœa, as I have elsewhere remarked to you, there is a striking analogy between the action which takes place on the mucous membrane of the uterus and what is observed on the internal surface of the larynx in croup. Each of these surfaces becomes congested; on each there is an exudation of coagulable lymph, which results in the formation of a deciduous membrane. When this lymph or diptheritic deposit is poured out on the cavity of the uterus, the organ becomes the seat of irritation, and is thrown into contractions simulating the throes of parturition. These continue more or less at intervals, until the deciduous mass is expelled, not as a whole, but in shreds or patches. You see, therefore, gentlemen, how readily you can account for the phenomena presented by this case, and which phenomena are peculiar to this form of dysmenorrhœa. Oldham, I believe, was the first to speak of the tendency of the uterus to become enlarged in the congestive or membranous type of dysmenorrhœa, and also of occasional retro-version of the organ. That the uterus does become enlarged from congestion, there is no doubt; but that occasional retro-version occurs as a consequence of the exudation on the internal surface of the womb, is a question to be determined by future observation. The membrane, however, which is expelled does not always consist simply of coagulable lymph. The mucous membrane of the uterus itself has been recognized in the expelled mass. Plater long since published a case of this nature in a paper entitled "*mola incipientis frequens dejectio*;" and Morgagni has described with great minuteness a membrane thrown off from the uterus which had all the characters of the mucous membrane of that organ. Follen, Lebert, and others, have recognized in the dysmenorrhœal membrane the following peculiarities known to exist in the mucous membrane of the uterus: 1st. Considerable thickness, greater than that of any of the mucous surfaces of the body; 2d. Tubulous glandules, readily detected with a lens, and visible even to the naked eye; 3d. These glandules are united to

each other by a peculiar tissue and blood-vessels, which together constitute the dermis of the mucous membrane.

You will remember, when describing the anatomy and physiology of the uterus, I called your attention very particularly, among other points, to a *fibro-plastic* tissue, properly so named, not only from its microscopic characters, but because it belongs exclusively to abnormal structures; the presence, therefore, of this *fibro-plastic* material in the mucous investment of the uterus is worthy of recollection, as being the only example in the economy of this character of tissue in any normal structure. No satisfactory explanation has yet been given of its presence, and it remains for some future observer to elucidate the question. Dubois simply suggests that it may be due to the numerous changes, which the mucous membrane of the organ is more or less constantly undergoing. Let me here caution you against an opinion entertained by some writers respecting the substance—whether it be mucous membrane or coagulable lymph—expelled from the uterus during an attack of congestive dysmenorrhœa. They contend that the substance is essentially a mole, and at the same time attempt to show that a mole can only be the result of previous pregnancy. You can readily perceive that, in regard to married women affected with dysmenorrhœa, this opinion would be harmless. Not so, however, with the young girl. Her chastity becomes at once involved, and her character blasted. It is unnecessary for me to enter into an argument to prove that the material thrown off in dysmenorrhœa is not a mole. The fact is too obvious to need discussion; and I have elsewhere attempted to demonstrate that a mole may exist without previous gestation.

Causes.—Congestive dysmenorrhœa may be produced by any of the causes which are known to excite uterine congestion—such, for instance, as cold, sudden mental emotion, the intemperate use of ardent spirits, a too stimulating diet, indolent habits, the sudden suppression of the menses, the rash employment of emmenagogues, abuse of sexual intercourse.

Symptoms.—There will be a feeling of weight from the increased size of the uterus, the weight being felt principally against the rectum, producing sometimes tenesmus; the pressure will occasionally be in front, causing more or less vesical irritation; a dragging sensation about the groins, with uneasiness in the lower portion of the back; there will also supervene lumbo-abdominal and intercostal neuralgic pains. To this latter character of pain, as connected with uterine disturbance, I have already on several occasions adverted. The mammæ often become the seat of uneasy sensations, with more or less nausea; and I have seen in some severe forms of congestive dysmenorrhœa the most fearful paroxysms of nervous irritation, at times bordering on mania. During the efforts which the uterus makes to expel the membranous substance, the pains frequently simulate those of labor, both in their intensity and recurrence.

Diagnosis.—There is no difficulty in distinguishing congestive dysmenorrhœa from the other varieties which occasionally present themselves; but, in my opinion, there is one symptom peculiar to this type, and which will always enable you to avoid error of judgment—it is the character of the discharge, consisting of shreds or fragments, instead of the ordinary menstrual fluid.

Prognosis.—This is an affection which, though sometimes protracted, is usually under the control of remedies, provided there be a just opinion formed as to the particular variety of the malady.

Treatment.—I am sure there is not one present who does not clearly understand the therapeutic indication. The cause of this girl's sufferings is a monthly congestion of the uterus beyond what nature requires for the natural catamenial function. The whole duty, then, of the physician, —knowing this to be the fact—is by remedial agents to relieve nature of this excessive action. With this view, you will, I am confident, concur with me in the following treatment: Let this girl lose from over the sacrum, by means of cups, \mathfrak{z} iv of blood, commencing two days before the ensuing return of the catamenia; then every two weeks, as circumstances may require, take \mathfrak{z} ij additional from the sacrum. She should be freely purged, and, with this object, give her this evening the three following pills, followed by \mathfrak{z} j of castor oil in the morning:

\mathfrak{R} Extract Colocynth. Co.	}	. . . . .	āā gr. vj
Submur. Hydrarg.			
Pulv. Antimonial.		. . . . .	gr. j.

Divide in pil. No. iij.

The bowels should afterward be kept soluble by a wine-glass of the following saline mixture, as may become necessary:

\mathfrak{R} Sulphat. Magnesiae	}	. . . . .	āā \mathfrak{z} j
Sup. Tart. Potassæ			
Aquæ puræ		. . . . .	Oj

Ft. sol.

This treatment, together with a diet strictly vegetable, will equalize the circulation, break up the congestive tendency, and restore the girl to health.

In cases like the one before us, instead of local depletion in which I have great confidence, I am often in the habit of recommending small revulsive bleedings from the arm, say \mathfrak{z} ij at the time of the catamenial flow, and \mathfrak{z} ij in fifteen days, to be continued as long as circumstances may indicate. This was the favorite practice of Lisfranc, and I have very great faith in it from repeated success. It will, however, be necessary to do something at the time of the menstrual crisis to quiet the pain, which is so significant and annoying a symptom of this form of dysmenorrhœa; and for the purpose you will find great power in opium. Let an opium suppository, containing one grain, be introduced into the rectum; or what will often prove highly serviceable, twenty drops of laudanum, in a wine-glass of tepid water as an enema. I have derived

much benefit from lubricating the neck of the uterus with a portion of the following ointment, and it will sometimes have a magical effect in soothing the pain :

R	Extract. Belladonnæ	. . . . .	3 ss
	Adipis	. . . . .	3 ss

Fl. Ungt.

In another place I have spoken of, and endeavored to explain, the *modus operandi* of the liq. ammoniæ acetat. in congestive dysmenorrhœa. It may be given in 3ij doses in a table-spoonful of cold water three or four times a day while the pain continues.

Congestive dysmenorrhœa is, I think, a common cause of sterility, which is explained as follows : The successive formations of the deciduous membrane on the internal surface of the uterus, produce, to a greater or less extent, a morbid influence on the lining membrane of this organ ; and it is this morbid condition of the mucous surface which prevents a healthy gestation. It is in such cases that we meet with what is termed *molar pregnancy*. If, therefore, this patient were a married woman, I should in addition to what has already been advised, place her under the full effects of mercury, which I believe to be the only remedy capable of removing that morbid state of the uterine mucous surface, which experience has shown to be adverse to healthy gestation. Dr. Lever, in a paper published in the "Transactions of the Royal Medico-chirurgical Society, in 1839," remarks that, according to all the evidence within his reach, this variety of dysmenorrhœa is the most frequent antecedent of carcinoma uteri, and it stands in the proportion of 54.19 per cent. There is a form of dysmenorrhœa which will sometimes prove troublesome ; it arises from inflammation of the ovary, which Tilt has termed the dysmenorrhœa from *ovaritis*. The diagnosis is not difficult—the prominent symptom will be excessive pain in the affected ovary, much increased by pressure. The remedies consist in leeches, purgatives, rest in the recumbent posture, vegetable diet, and, after the leeches, a blister will be of signal service.

You will also have frequent occasion to prescribe for patients suffering under what may be properly termed *nervous dysmenorrhœa* ; this is met with in females whose nervous system is exquisitely sensitive, and who suffer, from this circumstance, excessive pain during the menstrual period. It is important that a clear diagnosis should be made of the case. The following treatment in pure nervous dysmenorrhœa, will rarely fail to accomplish a cure. For one day before the menstrual flow, let the patient take one of the following pills twice a day—and during the period of the menstruation, one of the pills every two hours, until the pain is mitigated.

R	Extract Hyoscyam.	}	3ā 3j
	G. Camphoræ			
	Pulv. Doveri			

Fl. Massa in pil. xx dividenda.

In addition, should it become necessary, an opium suppository may be introduced into the rectum. But the radical cure of this character of dysmenorrhœa will depend upon properly controlling the morbid condition of the nervous system, which will be best accomplished by a tonic course of treatment during the interval between the menstrual periods. The shower-bath, horseback exercise, etc., will be useful.

FACIAL HEMIPLEGIA IN AN INFANT, TEN DAYS OLD.—J. H., aged ten days, is brought to the Clinique by its aunt, who says its mother is much alarmed for fear her little infant will never get its face right. "Madam, was that child delivered with instruments?" "Yes, sir." "So I thought, my good woman." Here, gentlemen, is a case of paralysis of the face in the new-born infant, which you will sometimes observe in practice, and it is important that you should understand the facts connected with its production, viz.: 1st. That it is almost always the result of undue pressure of the forceps on the side of the face; 2d. It is usually evanescent, and productive of but little harm, excepting the anxiety experienced by the parent. Cold is also a cause of this form of hemiplegia. The paralysis consists essentially in injury to the seventh pair of nerves.

Treatment.—All that is necessary is to bathe the affected sides of the face several times during the day with camphorated oil or soap liniment. Occasionally, in protracted cases, a small blister will be useful behind the ear.

ABSCCESS IN THE NECK OF A CHILD, TWO YEARS OLD.—R. R., aged two years, has a small abscess on the right side of the neck, which causes her to fret. "How long, madam, since you first observed that swelling?" "About ten days ago, sir, I noticed it for the first time." "Have you ever observed any lumps in the neck of your child before this one appeared?" "Never, sir." "Has its health always been good?" "Yes, sir, she has never had a day's sickness until this time." Abscesses, gentlemen, will form in the neck of young children from various causes; you will sometimes find them connected with a scrofulous diathesis; they often result from cold, injury, etc. These swellings may be congenital or acquired. They are sometimes encysted; at other times they are, as is the case in the present instance, simply the result of ordinary inflammation terminating in suppuration. It is very evident that there is a collection of matter, and I shall, therefore, without delay, evacuate it. [Here the Professor opened the abscess, and half a wine-glass of pus escaped.] "Take that child home, madam, and use a bread and milk poultice for a day or two, and your child will soon be well." It is important in these cases to evacuate the matter as soon as it is formed, for the reason that it alleviates the pain, and facilitates the restorative process.

VENEREAL CHANCRES IN A WOMAN, TWENTY-FOUR YEARS OF AGE.—J. M., aged twenty-four years, seeks advice for a discharge from her vagina, which she says she has had for the last week. The patient before you, gentlemen, complains simply of a discharge from her vagina. Our duty, before attempting any relief, is obviously to discover in the first place the character of the discharge, and then its cause. These two facts I have ascertained. The discharge is purulent, and proceeds from a venereal chancre in the vagina. [The patient was placed on the bed, and the chancre on the inside of the left *labium externum* fully shown.] This is a case of primary syphilis. There is as yet no bubo, and we shall probably be enabled to prevent its formation, which is always a desirable object.

Treatment.—This will consist of both local and constitutional measures. I now, as you perceive, cauterize the chancre with the solid nitras. argenti. This is the only local application I shall employ for the present. The constitutional treatment is intended thoroughly to neutralize the venereal poison, and guard the system against the disease in the secondary form, and will consist as follows :

R	Massæ Hydrarg.	.	.	.	.	.	gr. xxxij
	Pulv. Opii	.	.	.	.	.	gr. iv
							<i>Divide in pil. xvi.</i>

One pill twice a day until ptyalism is produced ; then, one every other day, in order that the effects of the mercury may be continued for some time ; when the ptyalism is over, the patient should take daily half a pint of the compound decoction of sarsaparilla.

GESTATION SIX MONTHS ADVANCED, COMPLICATED WITH PHTHISIS PULMONALIS, IN A MARRIED WOMAN, AGED TWENTY-FOUR YEARS.—DOES PREGNANCY EXERCISE ANY INFLUENCE IN CONTROLLING EITHER THE DEVELOPMENT OR PROGRESS OF PHTHISIS PULMONALIS.—Mrs. J., married, aged twenty-four years, six months advanced in pregnancy, is laboring under confirmed phthisis ; her pulse is one hundred and twenty, with copious purulent expectoration, night-sweats, and general emaciation. “How long have you been married, my good woman?” “Just ten months, sir.” “What was the state of your health previous to your marriage?” “It was quite good, sir.” “Had you any cough?” “No, sir, my cough commenced about four months ago.” “Were you regular in your courses before your marriage?” “Always, sir.” “Are your parents living?” “My mother died, sir, about two years ago, but my father is alive.” “Do you know what caused your mother’s death?” “She died of consumption, sir.” “Have you any sisters or brothers?” “I have two sisters and one brother living, and have lost one brother with consumption.”

The case before you, gentlemen, is not uncommon in practice. I have seen many such. Here is a young woman, just as it were budding into

womanhood, six months advanced in gestation, weighed down by a disease the most fearful and certain in its termination, of all the maladies on the calendar of human suffering. It requires no sagacity to predict the sad end of this affection—its nightly and daily progress sufficiently indicates its unrelenting character, and points with unerring truth to its fatal termination. It bids defiance to the medical man, and its truces are but so many delusive hopes to cheer, for the instant, the unhappy sufferer, and make more poignant the grief of disappointment. This case suggests to my mind a few thoughts on a subject about which I think there has, and does still exist an erroneous opinion—I allude to the supposed salutary influence exercised by pregnancy on the development and progress of phthisis pulmonalis. It was one of the favorite doctrines of the older writers, that pregnancy prevented the development of phthisis pulmonalis, and if developed, checked for the time being its progress; you will find also that this opinion is to a great extent participated in by recent writers.

Some, indeed, of the great names among the practitioners of almost our own times belong to this latter class; among them I might mention Desormeaux and Dugès. On the other hand, there are many who are disposed to doubt that any such influence is exercised by gestation, and among these are Louis and Rayer, whose opinions are founded upon careful personal observation. I might here allude to an interesting memoir by Grisolle, who has given some extremely interesting statistics, which fully, as far as they go, demonstrate two important facts: 1st. That women laboring under phthisis rarely become impregnated; 2d. That phthisis, in cases in which there is predisposition to the disease, is very apt to become developed during gestation, and this latter state, in lieu of checking, seems to increase its progress. I can not myself understand why pregnancy should in any way prevent the development, or arrest the progress of phthisis pulmonalis; and I think the opinion has been arrived at through a loose observation of facts. On the contrary, it appears to me that there are strong grounds for assuming that pregnancy is positively favorable not only to the development of the disease, but also to its increased progress. This conclusion has been the result partly of my own personal observation, and moreover it is, in my judgment, susceptible of explanation. It is well known that predisposition to phthisis may exist under certain circumstances in a dormant state for a long time in the system, and will not become apparent except through the operation of some one of the numerous exciting causes, which exercise a marked influence in the development of tuberculation.

Then the question presents itself—is there any thing in the impregnated state calculated to facilitate this development? This question will be more satisfactorily solved by a brief allusion to the ordinary condition of the system during gestation. I do not intend to assert that

pregnancy is strictly a pathological state, for we see many women pass through this period without inconvenience, and in the full enjoyment of uninterrupted health; but this is not always so, as must be manifest to every observant practitioner; and instead of uninterrupted health, pregnancy is frequently characterized by numerous disturbing influences such as: 1st. Greater activity in the circulation, as is evinced by a more frequent pulse, together with increased fullness and hardness; 2d. Constipation, which is so often an accompaniment of this state, and which certainly can not continue for any length of time without involving the general system in more or less disturbance, and thus tending to the development of disease in any organ in which there already exists a predisposition to morbid action; 3d. The severe and protracted vomiting, which occasionally supervenes upon gestation, often interfering with the healthy play of the nutritive functions; 4th. The various nervous disturbances, which usually present themselves during pregnancy; 5th. The change in the character of the blood which, according to the experiments of Andral and Gavarret confirmed by Cazeaux, becomes similar to the blood of chlorotic patients. Again a very common result of suppression of the menstrual function in the young girl is the development of phthisis pulmonalis—this is a fact of which every practitioner is cognizant; and how far, therefore, the suppression of this function during pregnancy may tend to facilitate the manifestation of the disease is a question, I think, worthy of consideration. In a word, the various phenomena to which I have just alluded are, in my opinion, so many influences calculated to bring into action the latent tubercle, and, in connection with certain statistical facts mentioned by Grisolle and others, they go far to sustain the opinion *that pregnancy is favorable to the development of phthisis pulmonalis*. How often is the suggestion made that marriage is the only remedy in the case of a young girl threatened with consumption; and how often alas! does this suggestion tend to the shortening of human existence! Think of this subject—it is one altogether worthy of attention.

GRANULAR VAGINITIS IN A MARRIED WOMAN, AGED TWENTY-FOUR YEARS, ACCOMPANIED WITH A THICK, CREAMY DISCHARGE.—Mrs. N., married, aged twenty-four years, has been affected for the last few months with a thick, creamy discharge from the vagina, together with a sense of uneasiness in the part. “Have you any children, madam?” “No, sir.” “You have never been pregnant?” “No, sir.” “Are your courses regular?” “They have not been as free as usual, sir, for the past few months.” “Have you noticed that they have been less free since this discharge appeared than they were previously?” “Yes, sir; before the discharge came on my turns were always right.” I have often, gentlemen, called your attention to the subject of vaginal discharges, and have told you that they require, in order that all error may be avoided, great

circumspection on the part of the practitioner. Here is a married woman, who complains of uneasiness in the vagina, and is also affected with a thick, creamy discharge; and connected with this discharge is another important feature—a *diminished secretion of the menstrual fluid*. This latter circumstance is not uncommon in these cases, and may, I think, be regarded as standing in the relation of effect and cause. Women who suffer from losses of a non-sanguineous character from the vagina, are extremely apt to have a scanty menstrual flow. But the question of interest for us to determine is—What is the true pathological state of this woman? A question which can only be solved by an examination *per vaginam*; for, as you well understand, this discharge may be the result of various morbid conditions, the real one of which can be recognized only by an accurate examination. Before introducing her here I carefully investigated the case of this patient, and I have ascertained that the uterus is entirely free from disease; the disease does not proceed from that organ, and is limited to the vagina. But non-sanguineous discharges from the vagina may arise from several different causes; such, for example, as simple acute or chronic vaginitis, blenorragia, etc. In the present instance, however, neither of these affections exist; I have discovered, in carrying my finger cautiously over the surface of the mucous membrane of the vagina, small elevations which, on the application of the bivalved speculum, I recognized to be granulations. These are the true source of the discharge, and the disease with which the patient is affected is *granular vaginitis*. This affection is essentially chronic, and is, according to Deville, who was, I believe, the first to call particular attention to it, very frequently the accompaniment of pregnancy; and he, moreover, states that it is not unusual for a spontaneous disappearance of these granulations to follow delivery.

Whatever connection there may be, however, between this pathological condition of the vagina and gestation, it is undoubtedly true that *granular vaginitis* may exist irrespectively of pregnancy. Though not a very common affection, yet I have seen several well-marked examples of it, and in the case of this patient you will see fully developed the striking peculiarities of the disease. [Here the patient was placed on the bed, and the Professor pointed out the characteristics of the affection—such as the small indolent granulations in the vagina, exhibiting in the present instance a confluent form; and attention was also called to a thick, creamy discharge connected with the granulations.] These small elevations which you have just seen are not always confluent; they are sometimes isolated, and occasionally will be found in the upper portion of the vagina; while again, you will notice them involving more or less the entire surface of this canal. It has been supposed that *granular vaginitis* is necessarily of a syphilitic character; but this is denied by Deville, who maintains that it may occur in the unmarried and virgin state. There is, however, under certain circumstances, a peculiar acidity

in the discharge accompanying *granular vaginitis*, which is capable of producing in the male an irritation closely simulating blennorrhagia; and it will, therefore, in such cases need much caution to make a proper distinction between the discharge which is purely one of irritation, and the discharge the result of specific virus, constituting gonorrhœa.

Treatment.—This affection will yield readily to the use of the *nitras. argenti*, together with frequent ablutions of tepid water. Many practitioners are in the habit of recommending the nitrate in the form of injection. To this there are two objections: 1st. The patient will rarely employ it properly; 2d. It passes immediately from the vagina, staining the clothes and also the parts external to the vulva. I much prefer the following mode of employing it—the granulated surfaces should be exposed to view with the bivalved speculum, and they should be freely painted by means of a camel's hair pencil with a solution of the *nitras. argenti* in the proportion of ʒj to ʒj of water. This may be repeated daily, having previously injected into the vagina two or three syringes of warm water for the purpose of removing from the granulations the morbid secretion, which is more or less constantly forming on them. This, together with the free use of the tepid hip-bath, will suffice to accomplish a cure. In the more advanced periods of pregnancy, and in gestation at any period in women of great nervous susceptibility, I should suggest the omission of the solution, and simply the use of injections of tepid water, and frequent ablutions.

CONVULSIONS AND EXCESSIVE PURGING IN AN INFANT ONE MONTH OLD PRODUCED BY THE MOTHER'S MILK; CATHARTIC PROPERTIES OF THE COLOSTRUM.—THE PREVENTION OF MILK ABSCESS AFTER WEANING.—Mrs. C., aged twenty-six years, married, the mother of one child one month old, says her infant has been very much disturbed in its bowels, ever since its birth, and has had several convulsive fits. "Do you nurse that infant, madam?" "Yes, sir." "Do you confine it to the breast, or do you sometimes feed it?" "It has never taken any thing but breast-milk, sir, since its birth." "Does it take the breast eagerly?" "Always, sir; it has never refused it; but as soon as it finishes nursing it begins to purge, and it will have ten and fifteen passages a day." "What do its passages look like, my good woman?" "Sometimes, sir, nothing passes it but curdled milk, and sometimes it is like green slime." "Was it a healthy infant at its birth?" "Yes, indeed, sir; it was a beautiful child." "You say your infant has had convulsions?" "Yes, sir, it has had four." "When was it first attacked with them?" "About ten days ago, sir." "Have you given it any medicine?" "No, sir; it purged so much, I was afraid to give it medicine." "What is the state of your own health, madam?" "It is not good, sir; I am so unhappy about my child that I am miserable." "Was your health good during your pregnancy?" "Yes, sir, until about a month before my child was

born." "What happened then?" "My husband, sir, is a sea-faring man. I heard he was shipwrecked, and I was so much disturbed I could not sleep, and I have never been well since." "I hope, my good woman, you will yet receive tidings of your husband." "Oh! sir, it was a false report; he is safe home again."

You have, gentlemen, in the person of this little infant a most instructive example of disease; and it will need but little reflection to enable you fully to appreciate two important facts connected with it—1st. The cause of the purging and convulsive spasms; 2d. The absolute necessity of removing this cause as speedily as possible. If you look at the attenuated form of this little sufferer, and connect with it the very significant circumstance that it has been recently attacked with convulsions, you will, I think, agree with me that no time is to be lost in rescuing it from the operation of an influence, which has so completely disturbed its health and placed its life in imminent peril.

The conversation which has just taken place between the mother and myself has elicited data sufficient to enable us to form a just opinion as to the original cause of the purging; and I have no hesitation in referring it to the unhealthy character of her milk. The convulsions, too, are the almost necessary consequence of this improper aliment through the irritation which it has produced primarily on the intestinal mucous surface, and secondarily on the *medulla spinalis*, thus evoking the convulsive movement. In reply to my question, the mother very emphatically answered that the infant had taken nothing since its birth but breast-milk; and you will not have forgotten what she said in reference to her own health during her pregnancy. She observed that her health was good until a month previous to the birth of her child. At this time she says she received intelligence that her husband was shipwrecked; and from that period to the present she has labored more or less under disturbance of the system. What inference, allow me to ask you, do you deduce from these facts? Is there any connection between the mental affliction of this woman on hearing her husband was lost, and the present ill-health of the infant? To my mind, the connection is positive, as is proved by a chain of concurrent testimony altogether irresistible. Her infant was healthy when born—its only nutriment was its mother's milk—and the question now arises—Was there any thing peculiar in the milk to make it unsuited to the delicate system of the child; and if so, to what circumstance is this peculiarity to be ascribed? I have spoken to you on former occasions of the many influences which are calculated to impair the mother's milk; and these influences may originate during pregnancy, or they may arise after delivery. Among them, I may cite mental emotion, no form of which is more absolute in its effects than grief and depression of spirits.

But I have a stronger proof still that the milk is the true cause of the infant's illness. On hearing the statement of the mother, I subjected her

milk to the test of the microscope, and I have recognized a very interesting fact, viz. : that it is characterized by the presence of numerous yellow corpuscles distinctly granulated, which appear to be the true attributes of what is termed the *colostrum*. This latter, as you have been told, represents the fluid first secreted by the breasts after delivery, and it differs from ordinary milk in the important circumstance that it possesses cathartic properties. The new-born infant contains within its intestinal canal a viscid material, called the *meconium* ; if this be not promptly evacuated, it will become a source of irritation, and not unfrequently give rise to much disturbance, terminating in convulsions. The *meconium* appears to consist of a mixture of bile and products secreted by the intestinal mucous surface. All experience proves that its sojourn after birth will lead to serious consequences ; and you see how consistent and true nature is in the conservative influence she exercises over the economy. The very first draught the infant receives from its mother's breast is provided with elements intended by their purgative action to remove from the system this noxious matter. As a general rule, the first discharges of the child are dark colored, consisting of the meconium, and such may be the character of the evacuations for twenty-four or thirty-six hours, and sometimes for a longer period. After the meconium has passed off, if the parent be healthy, the infant not interfered with by officious medication, and its aliment confined strictly to the breast, we shall rarely be called upon to prescribe for it.

I do not know that it has yet been determined at what particular period after birth the milk ceases to retain its colostric properties ; but both reason and observation seem to show that a few days only elapse before this change takes place. A point, however, of great interest to the medical man is this : if, through any exception to a general rule, the colostrum should, beyond its due time, continue to constitute a part of the milk, *it proves dangerous to the infant by the excessive purging it produces*. That this is the real cause of this infant's ill-health I entertain no doubt ; and whether it be the mental depression of the mother, or some other influence which has caused to be retained in the milk this cathartic element, is not so material as the broad fact that this element does really exist, and is the source of the child's sufferings. Now, what is the point of this whole case—what its practical bearings ? Here is an infant which has been confined rigidly to its mother's milk—it has taken no other nourishment—nor has any medicine been administered to it. But we find it has been laboring under severe irritation of the intestinal mucous membrane, and recently has been attacked with convulsions. In addition to these facts, you must remember it was a perfectly healthy child when born. The practical point, then, I apprehend to be this—that to attempt to relieve the purging and convulsions by medicine, without having previously analyzed every circumstance of the case, and traced the disturbed action to its source, would be sheer nonsense, and

the veriest imaginable quackery. No medicine which you can administer will have any salutary tendency until you first remove the cause of the irritation—the improper nourishment, which the child extracts from its mother's breast.

Treatment.—This infant must have another nurse immediately; if this can not be procured, it should be weaned. A fresh and healthy breast will do more for it than all the compounds of the *Materia Medica*. “Madam, if you continue to nurse your child it will die; but if you will prove yourself a sensible woman, and follow our advice, we will do what we can to restore it to health.” “O! sir, I am willing to do any thing you think best.” “Well, madam, can you procure a nurse for your infant?” “Yes, sir, I have a friend, who has just lost her child, and she will be very glad to nurse mine.” “How old was her child, my good woman?” “Six weeks old, sir.” “Is she a healthy woman?” “Very, sir.” “Then I recommend you not to lose a moment, but take your infant to her at once.

I shall order for this child no medicine; and shall, for the present at least, rely exclusively on a change of nourishment. “Will you come here, madam, next Monday, and report how your child is?” “I shall, sir.” “One word before you go, my good woman. If you are not careful you will have trouble with your breasts; and to avoid this, you must follow the directions which I shall now give you. Take every morning, for four or five days, a tea-spoonful of epsom salts in half a tumbler of water; let your diet consist of solids, such as boiled potatoes, rice, etc., and use as little fluid as you can possibly get along with. Apply cloths wet with spirits of camphor to the breasts; should they become hard and painful, you must have them drawn, not with a forcing-pump, or any such abominable contrivance, but by a pup. Let them be drawn only when they become painful from distention. If you will pursue these suggestions, you will have no trouble from inflammation or abscess of the breasts.”

HYPERTROPHY OF THE NYMPHÆ IN AN UNMARRIED WOMAN, AGED TWENTY-TWO YEARS, FROM SYPHILITIC DISEASE—CONGENITAL ENLARGEMENT OF THE NYMPHÆ AMONG THE BOSCHISMAN WOMEN.—Rachael S., unmarried, aged twenty-seven years, is laboring under considerable enlargement of the nymphæ, which causes her much annoyance in walking. [The patient was placed on the bed, and the nymphæ, or labia interna, were found very much enlarged, and projected at least two inches beyond the vulva.] This, gentlemen, is not a very common form of disease, but you will occasionally meet with it, and I am gratified, therefore, in being able to show you so complete an example of it as is presented in the case before us. The nymphæ may be enlarged from congenital deformity, which, however, is of rare occurrence. They may become enlarged from excessive excitement of the parts, and also from

venereal disease. In the latter case the structure of these organs becomes altered, degenerating often into a state of schirrus. Such is the condition of the parts in the person of this young woman, and she has frankly acknowledged that she has been severely affected with syphilis. Whenever you meet with an instance of enlarged nymphæ, the first question for consideration is—Does the enlargement (if in a married woman) interfere with marital rights, or does it render progression difficult or painful? In either of these cases it will be your duty to relieve your patient, the effectual remedy being excision of the hypertrophied organs. This may be accomplished either with the curved scissors or bistoury. The ligature is sometimes preferred. Even when resorting to the knife or scissors, it is recommended to pass a number of threads through the roots of the nymphæ, so that, after the excision, the borders of the wound may be brought together, and united by the first intention. This will certainly facilitate the healing process.

The nymphæ, considering their smaller volume, are much more vascular than the labia majora, but the vessels with which they are supplied are small, and you need, therefore, have no fear of hemorrhage from their removal. Pressure, or the *nitrat. argenti*, will suffice, under ordinary circumstances, to arrest the bleeding. It has been stated by some writers that *enlarged nymphæ* are peculiar to the Hottentot women. This question has called forth various opinions, and we have the conflicting testimony of travelers on the subject. It would seem, however, according to Dr. Davis, that the weight of evidence establishes the following facts: 1st. That there is a congenital enlargement of the external genitals, not among the Hottentot women, but peculiar to a numerous race known as the Boschismans; 2d. That it is not a prolongation either of the nymphæ or labia majora, but that the enlargement takes its origin from the superior commissure of the external labia, whence it gradually becomes developed in width, and descends in two pendulous folds, forming a sort of pudendal apron, said to be characteristic of the Boschisman women.

"My good woman, have you taken any mercury?" "Yes, sir, and my mouth became sore." "Do you wish to be relieved from the annoyance occasioned by these growths?" "Indeed I do, sir." "Then will you consent for me to remove them." "Yes, sir." [The Professor, grasping the nymphæ with a small forceps, excised them with a bistoury. The cut surface was then freely cauterized with the nitrate of silver.] Simple dressings are all that will now be necessary, and in a few days this patient will experience no further difficulty. It is important, however, with a view of purifying the system, to place this patient upon half a pint of the compound decoction of sarsaparilla and 3j of nitric acid dilute, daily, and let it be continued, with its occasional suspension of a few days, for about six weeks.

DYSMENORRHEA IN A MARRIED WOMAN, AGED TWENTY-FOUR YEARS, FROM STRICTURE OF THE NECK OF THE WOMB—DILATATION OF THE STRICTURE BY THE INTRODUCTION OF THE SOUND.—Mrs. H., married, aged twenty-four years, no children, has suffered for the last eight years from excessive pain during her menstrual periods. “When you have your turns, my good woman, how long do your courses continue on you?” “About three days, sir; but I lose very little, and suffer so much pain, that I am almost out of my mind.” “Do you have much forcing-down pain?” “Yes, sir; that is it exactly; I feel as if my bowels would be forced out.” “Have you taken any medicine for these pains?” “Yes; indeed, sir, I have taken almost every thing, but nothing does me any good.”

Here, gentlemen, is one of the forms of menstrual aberration which you will be occasionally called upon to treat, and you must not fail to bear in mind that your treatment, to be successful, must have some definite object—it must be directed against the real, and not the imaginary cause of the difficulty. This patient is affected with dysmenorrhœa, which, as you know, is a term applied to that character of menstruation marked by unusual suffering. But I have reminded you, on former occasions, that there are several varieties of painful menstruation, dependent on the special causes which produce them. Without repeating what I have elsewhere stated on this subject, I will merely remark that the case of this patient is one of striking interest. She has suffered for eight years—from the very commencement of her menstrual function—and though remedies have been freely administered, you hear her statement that they have been without effect. What do you imagine this failure of relief is owing to? Plainly and emphatically to the fact that the true cause of her suffering has escaped attention. I have examined this patient very thoroughly, and I find she has *stricture* of the neck of the uterus.

The cause, then, of her excessive pain is mechanical obstruction. There is not, in consequence of the stricture, space enough for a free outlet to the menstrual fluid. This is the explanation of the extraordinary forcing-down pains which characterize her menstrual periods. The remedy is one exclusively mechanical in its operation, and will consist in overcoming the stricture by gradual dilatation. This, I think, will be the most effectually accomplished by this instrument (a very small-sized metallic male catheter), which I much prefer to the ordinary bougie, which is usually recommended. I will now introduce this instrument, the rules for doing which are extremely simple. In the first place, gentlemen, you must recollect that the uterus is ordinarily parallel to the axis of the superior strait of the pelvis, and its two lips are encircled by the upper portion of the vagina. This latter organ—the vagina—is a crooked canal, its curves corresponding with those of the pelvis—the upper portion being in accordance with the superior, while the lower

portion is in the direction of the inferior strait. The point of junction between the two axes of the pelvis results in the formation of an obtuse angle. Now, as the mouth of the uterus represents the direction of the superior strait, and the external opening of the vagina that of the inferior strait, and as this instrument which I am about to introduce within the cervix uteri is also curved, it follows as a necessary consequence that, to ensure its safe penetration into the womb, it must be introduced with a special view to the curves of the pelvis, and the peculiar position of the vagina and uterus. [Here the patient was placed on the bed, and the Professor proceeded as follows: With the index finger of the left hand introduced into the vagina as far as the *os tincae*, he then placed the handle of the instrument at a right angle with the abdomen of the woman, and gently glided on his finger from before backward the curved extremity. As soon as this reached the *os tincae*, he depressed the handle, and gave an upward direction to the curved portion of the instrument, corresponding with the axis of the uterus. As soon as the instrument had entered the cervix, he gave two or three gentle turns from right to left, and then withdrew it.]

"Now, my good woman, have I hurt you?" "No, sir." "If you will come here on Monday next, I will do the same thing again, and in the course of two or three months you will be free from all distress at your monthly periods."

I feel great confidence, gentlemen, that this woman will be restored to health without any other aid than this simple dilatation of the stricture.

LECTURE XXIV.

Dropsical Effusions—Are they common in early life?—Their Causes and Treatment.—Ascites together with General Anasarca in a Boy, five Years old, the effects of Scarlet Fever—Importance of the Perspiratory Function.—Ascites in a Boy, three Years old, from Protracted Dysentery.—Convulsions from Suppressed Eruptive Disease in a little Boy, three Years old.—What is the connection between a Suppressed Exanthematous Affection, and Convulsions?—Retention of Urine in an Infant, three Days old—Difference between Retention and Suppression.—Suppression of the Menses, for the last six Months, in a Girl twenty Years of age.—Intermittent Fever—Has it any influence over the Menstrual Function?—Prolapsus Uteri from Engorgement of the Cervix, in a married Woman, aged thirty-two Years.—Fistula in Ano, in a married Woman, aged twenty-nine Years—Operation.—Neuralgia of the right Labium Externum, in a married Woman, aged twenty-four Years.—Mammary Abscess, in a married Woman, aged twenty-five Years, the Mother of one Child, four Weeks old.—Agalaxy, or absence of the Milk Secretion.—Galactagogue Properties of the Bofareira, (*Ricinus Communis*) as tested in the Cape de Verd Islands.—Excessive Exhaustion from Flooding after Delivery—Remedial Properties of Opium.

GENTLEMEN.—There is a disease among the affections of early life to which I desire for a short time to direct your attention, especially as we have among the children, who are to be presented to you to-day, several examples of the malady to which I allude—I mean dropsy. It is a singular fact, the truth of which you will be enabled promptly to confirm by reference to your text-books, that dropsy in early life, especially that form of it denominated ascites, has not attracted much attention from authors. I am the more surprised at this silence, for the reason that it can not be considered a rare affection, and very often involves seriously the safety of the child. Serous effusions, you are aware, may occur in various portions of the system—at one time in the tunica arachnoidea, at another, in the pleura, pericardium, peritoneum, etc.; and again, the brain and lungs will sometimes become the seat of the exhalation; in the latter case, constituting what is known as œdema of the lungs. In addition to which, there is often a deposit of serum, to a greater or less extent, in the cellular tissue, giving rise to *anasarca*. The ancients, whose knowledge of disease was mostly the result of observation, entertained opinions of surprising accuracy

respecting the general causes, symptoms, and treatment of dropsy. They were aware that serous infiltrations often originated from enlarged liver, disease of the kidney, etc.; you will find that Hippocrates dwells particularly on the influence of a humid atmosphere in the production of serous effusions, and speaks very emphatically of repeated hemorrhages, chronic and wasting diseases, as frequent causes of dropsy. What, then, is the true difference between the knowledge of the ancients on this subject, and that possessed by us? It is this: The knowledge of the old-school men was general, purely the result of observation; ours is more specific and tangible, though not yet altogether satisfactory, made so by the researches of modern science.

Pathological anatomy, that unerring light which never dawned upon the ancients, has not only revealed to us the truth of the opinions entertained by the fathers of medicine as to the causes of dropsy, but it has enabled us to explain the operation of these causes, and penetrate deeply into the secrets of morbid action. The ancients were aware, as the result of repeated observation, that serous exhalation would often follow engorged liver and diseased kidney; they knew, too, that drains on the system was a common cause of this character of exhalation; but their knowledge did not extend beyond these naked facts. All else connected with the etiology of dropsy was to them a subject of profound darkness, and, in the absence of our present knowledge, they had no means of removing the obscurity. In order to illustrate the truth of this proposition, I need merely mention, as has already been stated, that the ancients had observed the connection between profuse losses of blood and dropsical effusions; but they were unable to explain the circumstance, nor did they understand why serous infiltrations and profuse hemorrhages should so often bear to each other the relation of effect and cause. We, through the labors of cotemporaries, can satisfactorily explain this relationship. In hemorrhages, the blood is deprived of its albumen; and it is the loss of this element in the circulating fluid, which tends to dropsy, either general or partial. Again, among the primitive writers, it was known that dropsy was oftentimes connected with disease of the kidney; but nothing more than this broad fact was ascertained, and no scientific elucidation attempted. How stands the question now? Christison, I believe was the first to show that in renal dropsies, the blood also becomes deprived of a portion of its albumen, and in these affections there is a diminished secretion of urine—the blood, thus being deprived of its albumen becomes more fluid, and transudation, therefore, through the exhalents is accomplished with greater facility. Bright in England, and Rayer in France, have contributed largely to our knowledge on this interesting subject of renal disease. Magendie has proved: 1st. That when the blood is subjected to pressure in its vessels, the watery parts exhale through the walls; 2d. That the injection of a certain quantity of water into the veins causes an

abundant exhalation—a positive dropsy; 3d. That absorption is completely suspended by a fullness of the vessels. We are indebted to Bouillaud for the capital fact that when the circulation is obstructed in a large vein, effusion of serum is the consequence. I recall these points to your recollection merely to show the progress of our own times, and make more striking the contrast between the original and present condition of our science.

But I have nearly strayed from the object of these remarks, which was to remind you that dropsy, especially the abdominal type, is by no means a rare affection in early life. It seems, however, according to the observation of several recent writers, among whom may be mentioned, Rilliet and Barthez, that it is very seldom a primary disorder, being almost always the effect of previous disease. My own experience accords entirely with this opinion. One of the most fruitful causes of serous effusion in children is traceable to the various exanthematous diseases—more particularly, perhaps, scarlet fever, erysipelas, and measles. Ascites, then, when found to exist will most frequently be recognized as the effect of some morbid influence, and its danger as well as its control by remedial agents will depend very much on the nature of the affections of which it is the result. This *secondary* dropsy, as it has been termed, may present itself under one of two forms—acute and chronic, or active and passive. The former is more frequent, marked by symptoms of inflammation, and usually accompanied by fever; the latter, on the contrary, assumes the chronic type, and is unattended with febrile symptoms. Of these two dropsies, the former is far more destructive. A multitude of causes have been cited by authors as capable of giving rise to dropsical effusion; but of late, Becquerel and Rodier, whose researches have thrown so much light on this subject, have endeavored to show that every character of serous effusion may be explained as follows:

Either from an obstruction in the venous circulation, or from a diminished quantity of albumen in the blood. This division certainly imparts a degree of simplicity to the whole question, and liberates it from much of the embarrassment by which it had previously been surrounded. With this hypothesis, there is no difficulty in satisfactorily explaining the serous exhalation which follows the operation of either of these causes—for Magendie has proved the effect of pressure or obstruction in the vessels, viz., the effusion of the watery part of the blood; and when this fluid loses its albumen, it, of course, becomes more serous, and hence the greater facility of exhalation. A material point for consideration in reference to the subject of dropsy is the particular treatment to be pursued, and you see how plainly this is indicated by the division of the causes to which we have just alluded. But we shall have frequent occasion to discuss this subject when speaking of the individual cases which from time to time will be presented to you at the Clinique.

ASCITES, TOGETHER WITH GENERAL ANASARCA, IN A BOY FIVE YEARS OLD, THE EFFECTS OF SCARLET FEVER—IMPORTANCE OF THE PERSPIRATORY FUNCTION.—Michael M., aged five years, is laboring under acute and general anasarca, the effects of scarlet fever, with which he was attacked two months since. Here, gentlemen, is an example of general infiltration of the cellular tissue, together with serous effusion in the abdominal cavity. Anasarca is one of the ordinary results of scarlet fever, and you will occasionally observe, as is the case in the present instance, that it will be complicated with peritoneal dropsy, and sometimes, too, with hydrothorax, or a collection of water in the chest. Anasarcaous effusions may be local or general; in the case before us, it is general, every portion of the cellular tissue being more or less involved in the disease. This is rarely an idiopathic or primary affection; it is almost always the result of some previous malady, and, therefore, it is legitimately entitled to be termed *secondary*. Many have supposed that in all cases of anasarca, the result of scarlet fever, there co-existed Bright's disease of the kidney, and, consequently, albuminuria. This opinion, however, is not sustained by facts; and although there is sometimes a co-existence, yet it is now conceded that the connection is not a necessary one.

There is no difficulty in appreciating why anasarca, and even dropsy of the cavities, should so frequently follow scarlatina and other eruptive affections. In these diseases, the skin, one of the most important emunctories in the system, becomes seriously affected; its function, perspiration, is, for the time being, arrested, and the consequence is an increased quantity of serum in the blood, and at the same time an increased exhalation of watery particles through the walls of the vessels. To give you some idea of the importance and magnitude of the perspiratory function, I might remind you that the fluid of perspiration passes through numerous *glandulæ*, which are distributed on the skin. It has been estimated by Mr. Wilson that over thirty-five hundred of these *glandulæ* are found in each square inch of surface on the palm of the hand; each one is formed of a single tube measuring a quarter of an inch in length, so that in one square inch of integument on the palm of the hand, there will be found a length of tube equal to more than eight hundred inches, or seventy odd feet. Mr. Wilson further states that the average number of *glandulæ* to a square inch in other portions of the body is twenty-eight hundred. In a man of ordinary size, there are, it is computed, about twenty-five hundred square inches; this will make the number of *glandulæ*, or pores, *seven million!* The skin, therefore, must be considered in no other light than that of a most important portion of the economy, and its function can not be suspended for any length of time without necessarily producing more or less disturbed action. The patient before us is now suffering from the interruption of this function, which has resulted in an extraordinary exhalation of serum.

Treatment.—In all cases of dropsy, or anasarca, before attempting any

medication, the first points of inquiry should be, Is the affection primary or secondary—is it acute or chronic? and, finally, what is the nature of the disease which has preceded the effusion? These are cardinal questions, and no judicious treatment can be instituted until they are properly disposed of. In looking at this child, it is very evident that he is laboring under acute or inflammatory dropsy, the sequela of scarlet fever. He has a full, hard pulse, much febrile excitement, and presents all the evidences of a vigorous constitution. This is the very case for the prompt employment of the antiphlogistic remedies. I shall, therefore, order loss of blood, if from the arm, $\text{ʒ} \text{iv}$, if by leeches, let four be applied around the anus, which, under circumstances like these, is a point of value for the abstraction of blood. Should I direct one of you to bleed this child from the arm, you would fail in carrying out my direction—and why? Simply, because of the excessive anasarcaous tumefaction, it would be impossible to find a vein. But the patient requires to be bled, and, therefore, your reliance must be upon leeches. The application of the leeches may be repeated, should it be necessary; but as to this necessity, a sound judgment must always be exercised. Remember what I have often told you, that young patients, as a general principle, *sustain losses of blood badly*, and hence the greater necessity for a just discrimination. The subjoined powder should be administered with a view to a free action on the bowels:

R	Sub. Mur. Hydrarg.	.	.	.	.	.	gr. iv	
	Pulv. Jalapæ	.	.	.	.	.	gr. vi.	
	Pulv. Antimonial.	.	.	.	.	.	gr. $\frac{1}{4}$	M.

Followed in six hours by this draught:

R	Sulphat. Magnesiae	.	.	.	.	.	3j	
	Infus. Sennæ	.	.	.	.	.	$\text{ʒ} \text{ij}$	
	Tinct. Jalapæ	.	.	.	.	.	3j	M.

Diuretics are most cogently indicated in these cases; and for the patient before us, there is, perhaps, no more suitable combination than digitalis and nitrat. potassæ:

R	Nitrat. Potassæ	.	.	.	.	.	3j	
	Tinct. Digitalis	.	.	.	.	.	$\text{ʒ} \text{ij}$	
	Aquæ distillat.	.	.	.	.	.	$\text{ʒ} \text{vj}$	M.

After the bowels have been freely evacuated, a table-spoonful every six hours, according to circumstances. You are aware that digitalis will occasionally be attended with injurious effects. In its administration, therefore, caution is to be observed. A warm-bath daily would prove highly efficacious in promoting an action upon the skin. The child to be kept upon spare diet.

ASCITES IN A BOY, THREE YEARS OLD, FROM PROTRACTED DYSENTERY.—Arthur J., aged three years, is affected with peritoneal dropsy. “How long, madam, has your child had this swelling of its abdomen?” “About

two weeks, sir." "What was the state of its health before the swelling commenced?" "It was sick, sir, four weeks with the dysentery." "How do you know it had the dysentery, my good woman?" "Why, sir, it used to pass blood; and it was always straining, sir." "That is a good definition of dysentery." "How was its health previous to that time?" "It was good, sir; it was always a healthy child." "Does it pass blood now, madam?" "No, sir; it has not passed any for the last three weeks." In this child, gentlemen, you have an example of ascites the result of a drain on the system, constituting one of those forms of dropsy of which Becquerel and Rodier have spoken, viz., an effusion following the loss of albumen of the blood. [Here the little patient was placed on the bed, and the Professor proceeded to examine the abdomen.] You perceive that the abdomen of this child is extremely distended; and you can readily understand why it labors under oppressed breathing, the oppression being greater in the recumbent posture; it is because of the pressure of the fluid in the abdomen against the diaphragm, thus curtailing the capacity of the thorax, and, consequently, interfering with the healthy play of the lungs. You recognize, when I percuss the upper portion of the abdomen, a sound of resonance; while, on the contrary, in the lower portion the sound emitted is dull and flat. This must not mislead you. Above, the intestines more or less filled with flatus float on the surface of the fluid, and hence the resonance. Below, the dull sound is emitted, because I percuss simply the accumulated fluid. With one hand placed on the side of the abdomen (in this manner), and striking the opposite point thus with the other hand, I distinctly feel the wave of fluid. You are not to forget that it is very usual for young children to have an enlarged abdomen, in no way connected with dropsy; and sometimes a distended bladder may be mistaken by a careless practitioner for ascites.

Treatment.—This little patient is anæmic; it is suffering from the loss of albumen. The indication is to build up the dilapidated system, and repair the waste which the blood has sustained. Invigoration, therefore, is the great object. For this purpose I shall recommend, in the first place, $\frac{1}{2}$ grain of quinine three times a day mixed with sugar; a generous diet, consisting principally of animal broths; frictions, together with pressure on the abdomen, the frictions being made with equal parts of tincture of squills and digitalis; the latter will act promptly on the renal secretion; the former, compression, will tend to promote absorption. The cod liver oil, if it agree with the stomach, is an admirable remedy in this form of dropsy.

CONVULSIONS FROM SUPPRESSED ERUPTIVE DISEASE IN A LITTLE BOY, THREE YEARS OLD—WHAT IS THE CONNECTION BETWEEN A SUPPRESSED EXANTHEMATOUS AFFECTION, AND CONVULSIONS.—John B., aged three years, has been sick for a week; he has no appetite, is feverish, and has

had three convulsions within the last four days. "You say, madam, your child has been sick for a week?" "Yes, sir." "What was the state of his health previous to that time?" "It was very good, sir." "What has been his condition for the last week?" "He has been very restless and feverish, sir; he sleeps heavily, and jumps about and moans when he is in bed." "When had he the first convulsion?" "Last Thursday, sir." "Do you know what produced the convulsion?" "No, sir, indeed I do not." "Had he eaten any thing which disagreed with him." "No, sir." "Had he been eating apples, or nuts, or raisins?" "No, sir." "Do you know whether he has ever passed any worms?" "No, sir, I don't think he has ever passed any." "Have his bowels been confined?" "No, sir, they were always quite regular." "Do you know, my good woman, whether your child has been frightened lately?" "Oh, no, sir, nothing of that kind." "Have you noticed since he was taken sick a week ago, any eruption on his person?" "Yes, sir, three days after he began to decline, I noticed some small red spots on his face, arms and neck, but the next day they all disappeared, and then he had the spasms." "Before your child became so sick that he was obliged to be kept in bed, did he have any running from his nose?" "Yes, sir, and his eyes were very weak." "Did he vomit?" "Yes, sir." "Has he ever had the measles?" "No, sir, but a friend of mine, when she saw the spots on his person, told me it was the measles he had." "I think your friend was right, my good woman."

You must not suppose, gentlemen, that I have instituted the questions, which the mother of this child has just answered, without a motive. This little boy has been indisposed for a week, and within the last four days he has had three convulsions. What, under the circumstances, is the first duty of the physician? Surely, not blindly to prescribe medicine, but to ascertain, if possible, the true nature of the affection, and the real meaning of the convulsive spasm. Convulsions, as you have repeatedly been reminded, are by no means uncommon in early life—indeed they may almost be considered as peculiar to this age. Their causes are numerous; such, for example, as intestinal irritation, whether from improper food, worms, constipation, etc.; dentition, fright, cold, a sudden recession, or a sickly development of the various eruptive diseases, are also to be classed among the influences capable of provoking the convulsive movement. Convulsions, especially in early life, are almost always *symptomatic*, or, if you choose, the result of indirect irritation of the spinal cord, and whether this irritation be produced by dentition, worms, or repelled exanthemata, is for the physician to determine. In the case before us, what basis have we for a correct opinion? It appears that this little boy previous to a week since, when his indisposition commenced, was a healthy child. For the last few days, however, he has been feverish, heavy, restless; a slight eruption has appeared on his face, arms, and neck—this receded, and convulsions followed the reces-

sion. I notice now on the neck and face some eruptive spots, which have the characteristics of measles, and I have no doubt that the convulsions are the direct effect of an abortive attempt on the part of nature to throw the rubeolus eruption on the surface. This little patient, according to the statement of the mother, has had the various symptoms of measles, viz.: general languor and restlessness, heat of skin, vomiting, coryza, flow of tears, etc.; these two latter symptoms showing the connection between rubeola and irritation of the mucous membrane.

But what connection is there between suppressed exanthemata and convulsions? This is a question of unequivocal interest, more particularly because of its direct bearing on the therapeutic management of cases in which, under the operation of a badly developed, or suddenly receding eruptive affection, convulsions ensue. We can, I imagine, experience no difficulty in explaining this connection. Although we do not know what the specific poison is, yet by general consent it is now admitted that measles, scarlet fever, etc., owe their existence to a peculiar, but unknown virus. That this poison is not fit to sojourn in the economy, is abundantly proved, I think, by the fact that nature, as a general principle, throws it upon the surface. But when, from some contravention, she is unable to dispose of it, the result of this inability is soon disclosed by the nervous disturbance which ensues, and which frequently terminates in convulsions. How are the convulsions produced? This involves the necessity of another inquiry, viz.: Where is the poison—is it in the blood, or is it in the secretions? It has been very satisfactorily proved that the poison, whatever may be its nature, is directly communicable by the blood. You are aware that there are more or less constantly in the system various poisons—for example, urea, bile, carbonic acid, the matter of perspiration, etc.; but with this fact you must associate another most important one, viz.: that provision has been made for the escape of these poisons through their respective emunctories, the kidneys dispose of the urea, the intestines of the bile, the lungs of the carbonic acid, etc. Have you ever attended any cases of marked jaundice? If so, have you not sometimes observed the patient in the latter stages to become affected with coma? Now, on what principle do you account for the coma; or, in other words, is there any connection between coma and jaundice? The explanation is this—the bile, instead of passing into the duodenum through the *ductus communis choledochus*, is absorbed into the blood, the brain thus becomes poisoned, and hence the coma; so you see this condition of the brain is not always dependent upon an increased afflux of blood to that organ. In exanthematous diseases, in which the eruption does not appear on the surface, or in which it suddenly recedes, convulsions are not unlikely to follow, because of the irritation of this poison, *not on the brain, but on the spinal system*. Then, gentlemen, if this reasoning be correct, what is the precept to be deduced in cases such as the one before us, and what the treatment to

be pursued? Obviously, to aid nature in her efforts to get rid of the poison through the great emunctory—the skin.

Treatment.—This child, as soon as it reaches its home, should be put into a warm bath, made a little stimulating by a handful of mustard. It should then take every half hour, until the eruption is fully developed, a dessert spoonful of the following solution :

R	Liq. Ammoniz Acetat.	℥ iv
	Emet. Tart.	gr. j
		<i>Fl. Sol.</i>

The whole object, for the present, should be to direct to the surface—and these remedies are well calculated to have that effect. “Take your child home, my good woman, and be careful not to expose it to the cold. I will send a doctor to attend to it.” “Thank you, sir.” “Its drink should consist of rice-water, barley-water, cold water,” etc.

RETENTION OF URINE IN AN INFANT THREE DAYS OLD—DIFFERENCE BETWEEN RETENTION AND SUPPRESSION.—Joseph A., aged three days, is brought to the Clinique because of a swelling in the lower portion of its abdomen. “That infant, madam, is rather young to be brought here.” “Yes, sir; but the poor thing suffers so, I thought I would risk it.” “Where is its mother, my good woman?” “Sick in bed, sir.” “What is the matter with this little child?” “I don’t know, sir; it cries all the time.” “Have its bowels been moved since its birth?” “Yes, sir.” “Does it take its mother’s breast?” “It did at first, sir; but it refuses the suck for the last two days; it is all swelled in its belly, and draws its little legs up, and moans all the time.” “Let me examine it, madam.” [Here the Professor made a critical examination of the abdomen, which was distended and hard in the hypogastric region.] “Do you know, my good woman, whether this infant has passed its water since its birth?” “Oh! no, sir; that’s what we have been trying to make it do.” “What have you given it?” “All sorts of things, sir.” “Mention some of them, if you please, madam.” “Parsley-tea, and spirits of nitre, and a good many other things.” “Why did you give it these remedies?” “To make it pass water, sir.” “You did very wrong, my good woman; your motive was good, while your practice was abominable.”

This little infant, gentlemen, is laboring under retention of urine. You perceive here a circumscribed hard tumor, occupying the greater portion of the hypogastric region. This tumor, I need not tell you, is the distended bladder. The remedies which have been administered to this poor little sufferer, so far from accomplishing any good, have tended directly to aggravate its distress. Parsley root and sweet spirits of nitre are calculated to produce, through their diuretic action, an increased secretion of urine, and have no influence in overcoming retention. There is, as you know, a wide difference between retention and suppression of

urine. The latter is where the secretion is at fault; the former is that condition in which there is an inability to throw the urine from the bladder. Do you not at once perceive the importance of constantly bearing this distinction in mind in cases such as the one now before us? Nothing save the most unpardonable carelessness could possibly lead to error on this subject. See how simple the diagnosis is. In retention, there is a circumscribed hard tumor in the hypogastrium. In suppression, on the contrary, there is no such tumor, for the reason that, as there is a suppression of the urinary secretion, there is consequently no distention of the bladder. The causes of retention are numerous. It may arise from congenital malformation, a collection of mucus in the urethra, spasmodic contraction of the neck of the bladder, teething, worms, etc. In speaking of the attentions necessary to the new-born infant, I have enjoined upon you the necessity of inquiring as to the condition of its bowels and bladder. Always on your first visit after the birth of the child, which, as a general rule, should be made at an interval not longer than twelve hours from delivery, you should never fail to ascertain whether the bowels and bladder have been evacuated. If not, do not content yourselves with giving medicine, but proceed at once to examine whether there exists mechanical obstruction; and whether, in the case of the urine, the absence of its evacuation be the result of retention or suppression. Occasionally, in retention of urine in the new-born infant, the bladder becomes enormously distended; and in this affection, death may ensue from rupture of the bladder, rupture of the ureters, inflammation of the peritoneum and abdominal viscera, convulsions, coma, etc.

Treatment.—In the management of these cases it is important, if possible, to ascertain the true cause of the retention. In the case of this little infant, I can not detect any congenital deformity. There is no obstruction in the urethra, which sometimes exists in the form of a membranous band, nor can I perceive the presence of mucus in the passage. It may be that there is a spasmodic contraction of the urethra near the neck of the bladder. At all events, one thing is quite obvious—if the child be not immediately relieved by having its water evacuated, it will unquestionably die; and I shall, therefore, introduce this small catheter for the purpose of drawing off the urine. [The Professor introduced the instrument, through which there passed, by measurement, four ounces of fluid. The child was ordered to be taken home, and if it should not pass its water voluntarily in the course of four hours, the mother was directed to place it in a tepid hip-bath, and keep warm flannels applied constantly to the lower portion of its abdomen. The child was also ordered ʒj of castor oil, and to be put without delay to the breast.] “Madam, follow these directions, and I will send a doctor to see your child this evening; should it be necessary, he will draw off the water as I have just done.” “Thank you, sir.”

SUPPRESSION OF THE MENSES FOR THE LAST SIX MONTHS IN A GIRL, TWENTY YEARS OF AGE.—INTERMITTENT FEVER—HAS IT ANY INFLUENCE OVER THE MENSTRUAL FUNCTION?—Bridget A., aged twenty years, unmarried, has suffered from suppression of her courses for the last six months. “How were your turns previous to the last six months, my good girl?” “They were always right, sir.” “Do you know what caused them to stop on you?” “No, sir, except it was the fever and ague I took.” “When did you first have the fever and ague?” “Just six months ago, sir.” “How do you know that you had the fever and ague?” “Why, sir, I had a chill.” “What had you besides the chill?” “I had a fever, sir.” “Any thing else?” “Yes, sir; when the fever went off, I broke out in a perspiration.” “How often did you have the chill, fever, and perspiration?” “Every other day, sir.” “Well, my good girl, there is no doubt that you have had the fever and ague; you have given a very good description of it, and if it will gratify you to know what we doctors call it, I will tell you; *it is the tertian type.*” “Thank you, sir; but I have got it yet, sir.” “Well, we will cure you of it. Have you had your courses since you were first attacked with the chill?” “No, sir; I had them only one day when I caught the chill, and I have not seen any thing since.”

This, gentlemen, is an important case for you. What do you suppose is the true explanation of the menstrual suppression in this girl, and what is the feature in the case which is most worthy of your attention as physicians? The suppression unquestionably is the result of the impression made on the system by the tertian fever. The latter, therefore, is the true cause of this girl's trouble; and we can only hope to restore the menstrual function by removing the cause which has produced the disturbance. If you were to address your remedies merely to the restoration of the function, you would fail in the accomplishment of your purpose, for the simple reason that you can not convert an effect into a cause. Many of you who live in the South and West, where intermittents so extensively prevail, will often meet with cases similar to the one before us. I regard this form of fever as a very common cause of menstrual aberration, and the practitioner, forgetting to connect cause and effect, often fails in his remedies. You can readily explain the operation of this influence. Suppose a woman is menstruating—during the flow she is attacked with intermittent fever—the rigor closes the opened blood-vessels on the internal surface of the uterus, and the function is arrested. As long as the paroxysms of the intermittent continue, the same cause will be in operation, and consequently the suppression will be prolonged. Common sense, then, as well as science, clearly point out the course to be pursued in the present instance.

Treatment.—I shall pay no attention whatever to the suppression, but shall order a course of treatment for the purpose of breaking up the tertian fever. “Let me look at your tongue, my good girl.” Here,

gentlemen, you perceive the tongue is very much coated, indicating a deranged condition of the digestive organs. I shall order the following emetic:

℞ Pulv. Ipecac. gr. xv
 Pulv. Antimonialis gr. ij M.

This powder to be taken in half a tea-cup of warm water. After the emetic has had its full effect, a table-spoonful of the following solution three times a day:

℞ Sulphat. Quininae }
 Acid Sulp. dilut. } aa 3j
 Aquæ distillat. ʒ viij
 Ft. sol.

PROLAPSUS UTERI FROM HARD ENGORGEMENT OF THE CERVIX IN A MARRIED WOMAN, AGED THIRTY-TWO YEARS—ABUSE OF THE PESSARY.—Mrs. S., married, the mother of three children, the youngest eight months old, complains of bearing-down pains, with a frequent desire to pass her water. “How long, madam, have you suffered from these pains?” “They commenced, sir, about six weeks after the birth of my last child.” “Do you suffer most when you walk about, or lie down?” “When I walk, sir, I feel a great deal of pain; but when I am resting on my back I am quite easy.” “Have you had any thing done for you, my good woman?” “Yes, sir; a doctor introduced this instrument, and said it would keep my womb up.” [The patient here shows a hard globular pessary.] “How long have you used that instrument, madam?” “O! sir, it caused me so much pain I was obliged to send for the doctor to take it away the next day.” “You did very right, my good woman.”

Here, gentlemen, is an interesting case. All the sufferings of this patient are due to prolapsion of the womb. The bearing-down pains and frequent desire to micturate are exclusively traceable to this circumstance. The cause, then, of these difficulties being the prolapsion, common sense obviously points to the course to be pursued in order to restore this woman to her usual good health. A physician, who should be content with abstract reasoning—the most fatal of all logic in the sick-room—would very naturally have recourse, in this case, to some mechanical contrivance, such, for instance, as a pessary, with a view of retaining the uterus in its position. Such has been the practice with regard to the patient now before us, and it is not only bad practice, but, if it had been persevered in, would have led to serious consequences.

Prolapsus uteri, as you have often been told, may arise from various causes, and, before having recourse to any remedial agents, it is our duty to ascertain what it is that has given rise to the displacement. Through a vaginal examination, I have discovered that this woman is laboring under what has been very properly denominated “hard” engorgement of the *cervix uteri*. The *cervix* is much enlarged, regular on its surface, and quite sensitive to the pressure of the finger. It is not an example

of *schirrus*, but simply one of indurated or hard engorgement. This form of engorgement is most usually seated in the cervix uteri, and is sometimes limited to one or other of the lips of the *os tinæ*; under other circumstances, however, it will occasionally involve the body, and entire structure of the organ. Hard engorgement of the uterus is the result of inflammatory action, the causes of which are numerous, such as suppression of the menstrual function, arrest of the lochial discharge, childbirth, cold, coition, stimulating injections, masturbation, etc. One of the commonest effects of engorgement of the *cervix uteri* is prolapsion of the organ; and you can very readily, I apprehend, understand why this result should follow. Under the influence of engorgement, the uterus becomes increased in volume, and consequently in weight; this increase of weight necessarily causes the organ to descend more or less into the vagina, and thus the prolapsion is produced. Do you not, therefore, at once perceive the absurdity of introducing, in a case of this kind, a pessary? This instrument can exercise, under the circumstances, no curative effect, but will tend directly to a general aggravation of all the morbid conditions—it becomes a source of irritation to the engorged surface, thus inviting an increased afflux of fluids to the part, and thereby augmenting the supply of morbid elements. Its tendency, also, is by pressure to produce ulceration. There are, I have no doubt, numerous cases of fatal disease originating in the introduction and continued use of the pessary in instances of prolapsion from engorgement.

Treatment.—From what has just been said, it is plain that the prolapsion in this case is merely an effect—while the true cause is the engorged condition of the cervix. The indication, therefore, is *to let the prolapsion alone*, and direct all our efforts to the removal of the engorgement. For this purpose, I shall prescribe revulsive bleedings from the arm— $\frac{3}{4}$ iv of blood should be abstracted once in ten days, as circumstances may require, vegetable diet, the occasional use of saline aperients, together with repose in the recumbent position. This form of engorgement will usually yield, without difficulty, to the above treatment.

FISTULA IN ANO IN A MARRIED WOMAN, AGED TWENTY-NINE YEARS, THE MOTHER OF FOUR CHILDREN—OPERATION.—Mrs. L., married, aged twenty-nine years, the mother of four children, the youngest two years old, complains of pain in her back passage, and says she has suffered for several months from a discharge of matter from the bowel. [Here the patient was placed on the bed, and the Professor detected on the side of the anus a fistulous opening, into which he introduced a probe, and with the index finger of the left hand carried into the rectum, he felt the probe pressing on the finger, the probe having entered the intestine through an opening, which communicated with the lower orifice.] This patient, gentlemen, has a *fistula in ano*, which is oftentimes a painful and annoying malady. “Do you know, madam, what occasioned this fistula?”

"No, sir, indeed I do not." "Have your bowels been much confined?" "They are nearly all the time confined, sir." Constipation is a very common cause of this form of disease; cold, injury to the part, and numerous other influences, will also produce it. When there is no external opening, the fistula is said to be blind; and, in the opinion of the best surgeons, it is, I believe, conceded that, in the great majority of cases, the fistula commences in the rectum, and not on the external surface. The fistula in the case before us is not, according to the definition, a blind one, for it has two openings, one externally, and one communicating with the rectum. The only remedy is the knife, the object of which is to divide completely the fibres of the *sphincter ani* muscle, in order that the parts may be as much as possible free from the irritation of muscular action.

"Do you wish, my good woman, to be relieved of your difficulty?" "Indeed I do, sir." "Then, if you will allow me, I will at once perform an operation, which will restore you." "It won't lay me up long, sir, will it?" "No; you will be well in a few days, and I will see that you are properly attended to. Do you consent?" "Yes, sir." [The patient was placed on the bed on her side.] Now this is a simple operation, but not so simple that it does not require care and the proper exercise of judgment. In the first place, I smear my index finger with oil, and, as you perceive, introduce it into the rectum; I then take this small probe, and penetrate the sinus or fistula through its lower orifice, which is on the summit of this small warty eminence about one inch and three quarters from the anus. You observe that having introduced the probe into the sinus, I direct it toward my finger, and now feel it pressing on the finger through the internal aperture. I withdraw the probe and introduce the probe-pointed bistoury through the fistulous track—the instrument is now in the rectum; before making any incision, I bring the probe-portion of the bistoury through the anus, and with one sweep from within outward, I divide the textures constituting the septum between the internal and external openings of the fistula. The wound should be dressed with simple lint, and in a few days the patient will be restored. You have observed that in making the division, I did not direct the knife toward the vagina, for the reason that the contraction of this passage would tend to separate the lips of the wound, and consequently prevent the healing process. This is important to be recollected in operating for fistula in the female. It is desirable in these cases that the bowels should not be moved for two or three days after the operation; and, therefore, it will be well to order ten grains of Dover powder, or forty drops of laudanum.

NEURALGIA OF THE RIGHT LABIUM EXTERNUM IN A MARRIED WOMAN, AGED TWENTY-FOUR YEARS, THE MOTHER OF ONE CHILD TWO YEARS OLD.—Mrs. E. complains of a severe pain in the vulva, and says she has been

afflicted with it for the last six months. The slightest touch of the part occasions excessive agony; and sexual intercourse, from this cause, can not be endured. This case, gentlemen, is one of more than ordinary moment. I can not say it is very common, and yet I have met with several examples of it. The only feature about the case is the intensely acute pain in one of the labia. In all other respects, this patient seems to enjoy robust health. Her digestion is in good order; her menstrual function in every way natural, and but for this pain, she says she would consider herself a perfectly healthy woman. You would very naturally expect, from what you have just been told, to find on examination some evidence of disease in the part—a tumefaction or lesion of some kind or other. I have examined this patient very thoroughly, and there exists neither tumefaction, ulceration, nor the slightest possible lesion of any description. The parts are apparently in a *healthy and normal condition*; and the point, therefore, of exclusive interest is the great sensibility of the *labium* to the gentlest touch. It occurred to me that this might be an example of one of the forms of the *lumbo-abdominal neuralgia*, to which the attention of the profession has been especially directed by Valleix, and to which I have alluded on former occasions in this Clinique. Accordingly, assuming that the pain was the result of a morbid state, or if you choose a neuralgic affection of the *lumbo-abdominal nerves*, I made pressure on the sides of the upper lumbar vertebræ, and soon ascertained that I caused great uneasiness to the patient. Why did pain ensue from this pressure? Evidently, because of a morbid sensibility of this nervous center—the medulla spinalis—and I have no doubt that the distress in the labium is attributable to this circumstance.

A case like the one before us would be apt to prove rebellious to treatment, for the reason that the true cause of the suffering would very probably escape detection. You see, therefore, how important it is, under all circumstances, to exercise a discreet judgment, and make an attentive survey of the entire ground. I was utterly at a loss to account for the distress of this patient from any evidences revealed to me by an inspection of the parts; and it was not until I had examined the lower portion of the spine that I fully determined in my mind the source and nature of her malady. It is well understood that cauterization and other active remedies applied either to the spine or to the terminal nervous branches of the integuments, will exercise a most salutary influence on the terminal branches themselves as well as on the nervous center—the spinal cord. Hence it is that we are enabled, by these therapeutic agents, successfully to combat the various forms of neuralgia. It is on this important principle that we found our hopes of cure in such cases from the employment of the red-hot iron, the various escharotics, etc. In obstinate uterine neuralgia, in which the pain has been confined to the *cervix uteri*, without the slightest approach to or-

ganic lesion or functional derangement, the application of a powerful escharotic, either the red-hot iron, or the acid nitrate of mercury, or, in accordance with the practice of Malgaigne, the incision of the cervix, is followed by complete relief.

Treatment.—I shall recommend for this patient an issue on the side of the lumbar vertebræ, made with the strong nitric acid. “Madam, do you wish me to relieve you?” “Indeed I do, sir, for I am a great sufferer.” “Very well, my good woman, I will make an application to your spine which I have no doubt will be the means of removing all your distress.” [The patient was placed on the bed, and the Professor made an issue the size of half a dollar on the left side of the lumbar vertebræ.] This issue in the course of a few days will commence discharging, and I feel great confidence it will have the desired effect. It may, however, be necessary to continue it for several weeks.

MAMMARY ABSCESS IN A MARRIED WOMAN, AGED TWENTY-FIVE YEARS, THE MOTHER OF ONE CHILD FOUR WEEKS OLD—AGALAXY, OR ABSENCE OF THE MILK SECRETION—GALACTAGOGUE PROPERTIES OF THE BOFAREIRA (RICINUS COMMUNIS) AS TESTED IN THE CAPE DE VERD ISLANDS.—Mrs. C., married, aged twenty-five years, the mother of one child four weeks old, complains of severe pain in her left breast, which she says is almost insupportable. “How long, my good woman, have you had the pain in your breast?” “For the last ten days, sir.” “Do you nurse your infant?” “Only with one breast, sir.” “Why did you not give it both breasts?” “I did, sir, at first, but the left one began to pain me so much, that for the last few days I have not been able to nurse my child from it.”

[The Professor examined the breast, and discovered a large mammary abscess.]

This woman, gentlemen, presents one of the most annoying complications of the lying-in room. It is not a dangerous affection, but it is one of intense suffering to the patient, and frequently protracted in its course. I may safely say that, in the great majority of instances, mammary abscess is the result purely of neglect. There is, perhaps, no cause more constant in its production than over-distension of the breasts. When these are properly disgorge, you will rarely if ever be called upon to treat this form of abscess. If, on the contrary, from too long delay in the application of the child to the breast, or from its inability to extract the milk, whether from its own feebleness or malformation of the nipple, or from any other circumstance, the mammæ should become distended, inflammation and one of its terminations, suppuration, is almost sure to ensue. Indeed this is the general rule, while the opposite will prove the very rare exception.

It is admitted that the true cause of mammary abscess is essentially a distension of the milk ducts; and with this view of its pathology the

prevention of the malady under consideration consists obviously in promptly liberating these ducts from all undue distension. There is no remedy so efficient for this purpose as the early application of the infant to the breast. I make it an invariable rule—except in cases in which the mother is incapable of nursing—to have the child put to the breast in two or three hours after delivery—as soon, in a word, as the mother has had a little repose from the fatigue of her labor. But it may happen that, although the infant is thus early applied, it will not be able to extract the milk. This may arise from several circumstances: 1st. There may be but little milk in the breasts, and in this case there will be no fear of distension; 2d. The nipple may be too flat, or the orifice at its extremity obstructed by a scurf, etc.; 3d. The child may labor under some inability, either from deformity, weakness, etc.; 4th. The nipple may be sore or fissured. Thus, you see, gentlemen, you will have performed but half your duty, if you content yourselves merely with directing the infant to be put to the breast; you must also satisfy yourselves that there is no obstacle to the proper flow of milk. If there be a flat or obstructed nipple, the remedy is a simple one. In the former case, you have a pint bottle filled with hot water. It is then to be emptied, and the mouth of the bottle applied immediately over the nipple. As the bottle cools, a vacuum is formed, and a powerful suction produced, which at once causes the nipple to become elongated. The bottle is then removed, and the child without any delay put to the breast. Should the nipple be obstructed by a scurf, this is to be removed by cleansing; and if the infant be too weak to extract the milk, the distension must be prevented by the application of another child, and if this can not be had, I prefer to all the mechanical contrivances in use, a young pup.

The instinct of the pup is worth all the ingenuity of the machinist, and will enable it to extract the milk without irritating the breasts. In addition to the disgoring the mammæ by the infant or pup, very great benefit will be derived by the administration of saline cathartics. These, by their serous discharges, will have a tendency to diminish the afflux of blood toward the breasts; and, in some cases, tolerant doses of antimony will be followed by the happiest effects. The patient, while threatened with engorgement, should be instructed to take as small a quantity of fluid as possible, and live principally upon boiled rice, potatoes, etc. But we will suppose, as is the case in the person of the patient before us, that the suppurative process has become established, and an abscess formed—What, then, is to be done? Promptly to evacuate the pus by opening the abscess in the most depending portion. After the matter has escaped, a small tent of lint should be placed in the opening, in order to prevent its healing, and it should be removed two or three times a day, as circumstances may require, in order to afford an outlet to any fresh accumulation of pus. Warm emollient poultices of bread

and milk, slippery elm, or flax-seed, may be used with advantage, but they should not be continued too long, for they will prove positively injurious. After the inflammation has subsided, and the purulent discharge sensibly diminished, pressure properly applied, either by adhesive straps or a bandage, will tend to consolidate and restore the breast. You will sometimes observe, after the abscess is entirely healed, more or less induration in the mammæ. This may be dispersed by various remedies, such, for example, as camphorated mercurial ointment in friction, soap liniment, and tincture of iodine, ʒj of the latter to ʒj of the ointment. Purgatives, with tonics, will also be indicated, depending upon the peculiar constitution of the patient. Mammary abscess is much more frequent in *primiparæ* than in *multiparæ*; for the reason that in women with their first children the breasts are much more sensitive to the irritation of distention, and consequently, *cæteris paribus*, more likely to become involved in inflammation. In addition to the common cause of milk abscess, viz., engorgement of the milk ducts, there are other influences capable of giving rise to this affection, such as mental emotion, cold, injury to the breast from blows or falls, etc.

Treatment.—When a mammary abscess is apprehended, the general practice is to leech, use warm fomentations, poultices, etc.; but, in my opinion, the best remedy is, as I have already stated, the removal of the distention by the application of the infant or pup—saline cathartics, tolerant doses of antimony—abstinence from fluids, together with gentle frictions with camphorated oil, which will tend to soften the breast, and promote the flow of milk. “Now, my good woman, it will be necessary to lance your breast, and evacuate the matter; have you any objection?” “No, sir; I wish to be relieved, and you may do what you like.” [The Professor opened the breast in the most depending portion of the abscess, and there escaped at least a pint of purulent matter. He then placed a small tent in the opening, and ordered a bread and milk poultice to be applied.] “You can go home, madam, and I will send a doctor to attend you.” “Thank you, sir.”

You will sometimes, gentlemen, meet with cases in which the breasts do not secrete milk, and this may arise from various causes, such, for instance, as organic disease of the mammary gland, either atrophy, hypertrophy, schirrus, etc. When there is a positive absence of the secretion, it will of course be your obvious duty to have provided for the infant a wet-nurse, or bring it up by the bottle. I speak of this for the reason that infants are much injured, if not sacrificed, by vain attempts to extract nourishment when there is none secreted. This fact again points out to you the necessity of examining critically into the condition of the breasts, and not rest content with the general hypothesis that, because a female has given birth to a child, she is, therefore, provided with the means of nourishing it. In this connection, I wish to call your attention for a moment to a practice which prevails among the natives of

the Cape de Verd Islands, for the purpose of promoting the secretion of milk, either when defective in quantity or altogether absent. The remedy employed consists of the leaves of a plant called by them the *Bofareira*, which has been ascertained to be the *Ricinus Communis* of the botanist. There are two varieties of the *Bofareira*, the white and the red; the former only, according to the natives, possesses *galactagogue* properties, while the *red* is said to be decidedly *emmenagogue*. Some marvelous accounts are given of the efficacy of this plant in producing a secretion of milk under the following conditions of system: 1st. In child-birth, when the appearance of the milk is protracted; 2d. In cases in which the female has not given birth to, or suckled a child for several years; 3d. In the unmarried, who have never borne children. It is employed in decoction; a handful of the white *Bofareira* is put into six or eight pints of spring water, and well boiled. The breasts are then bathed for fifteen or twenty minutes, and some of the boiled leaves spread over them, and allowed to remain until all moisture has been removed by evaporation. My attention was first called to the supposed *galactagogue* properties of this plant on reading an interesting paper on this subject by Dr. McWilliam, published in the London Lancet for 1850.

I have since that time made use of the *Ricinus Communis* in decoction with marked good effects in cases in which, after delivery, the secretion of milk was defective or tardy. Whether there be really any specific virtue peculiar to this plant in promoting the milk secretion, or whether it be merely because of the warmth and stimulus applied to the breasts, that they become filled with milk, as Dr. Cormack has recently endeavored to prove, I am unable to determine. One point, however, it can not be useless to urge, viz.: that the remedy is worthy of trial, and its excellence must be determined by future observation. Dr. Tyler Smith speaks highly of this plant as a *galactagogue*, having made several successful experiments with it. He also records evidence of its value as an *emmenagogue*. The decoction for this purpose is applied to the breasts, as before described, and the patient is also made to sit over the vapor, and bathe the genitals freely. The sympathetic connection between the uterus and mammæ is well understood, and the reciprocal influence exercised by these organs is a matter of constant observation. The ancients were not ignorant of the connection, and although they could not explain it, yet they felt its full force, and made from it rational deductions, which led oftentimes to salutary practice. On a former occasion, I spoke to you of the pain in the uterus not unfrequently experienced by the nursing mother, when the infant is applied to the breast. This, I reminded you, was explained on the principle of reflex action.

Again, what is more common than tumefaction of the breasts at the advent of the menstrual secretion? Friction and stimulation of the breasts will almost always excite action in the ovaries and uterus—and hence this very character of stimulation will very often prove one of the

most effectual remedies, not only in restoring the suppressed menstrual function, but also in establishing it in cases of *emansio mensium*. Nothing is more common than excessive pain in the region of the ovaries in women recently married, together with more or less menstrual discharge; may these two circumstances not, *in part* at least, be accounted for by the more or less handling of the breasts? I think so. In full view of the reciprocal and intimate relation existing between the mammæ and uterine organs, stimulation and warmth applied to the breasts are now recognized as valuable emmenagogue remedies; and you will remember that they have been employed in the Clinique, particularly in cases of suppressed menstruation, with good effect.

EXCESSIVE EXHAUSTION FROM FLOODING AFTER DELIVERY.—REMEDIAL PROPERTIES OF OPIUM.—Mrs. N., aged twenty years, married, was taken in labor one week since; she was delivered of a healthy living son, after a parturition of eleven hours, by her physician, Dr. Roche. Almost immediately after the birth of her child she was attacked with profuse flooding. I was requested by Dr. Roche to meet him in consultation, which I did without delay. The patient was extremely weak, and almost moribund from loss of blood. Before I arrived the doctor had removed the placenta, and had succeeded in bringing on contraction of the uterus. The organ was well contracted—the flooding of course had ceased—and the only indication in the case was to establish, by appropriate remedies, reaction. For this purpose, I suggested the free employment of opium, which in these circumstances you will find a most valuable agent. A tea-spoonful of laudanum was administered every fifteen minutes until the pulse gave manifestations of reaction. In one hour the heart's action increased in power, the pulsation of the radial artery at the wrist could be distinctly felt, and there was every indication that the patient had been relieved from her moribund condition. You need have no fear, gentlemen, of administering laudanum in full doses under these circumstances—it is the great hope of the accoucheur in these desperate cases—it is the very sheet-anchor of safety. Moreover, opium is ascertained to exercise a specific influence on the action of orbicular muscles, such as the uterus, this influence consisting in the increased force of contraction imparted to the muscular fibre. This is one of the peculiar attributes of opium, strikingly in contrast with belladonna, henbane, etc., which possess the opposite property of relaxing the muscular structure.

LECTURE XXV.

The Diseases of the Nervous System in Infancy; their frequency and importance.—Laryngismus Stridulus in an Infant, seven Months old.—Asphyxia; its meaning; its causes, and treatment.—Muguet in an Infant, ten Months old.—Prolapsion of the Mucous Membrane of the Vagina in a married Woman, aged twenty-seven Years, the mother of three Children.—Thrombus, or Sanguineous Tumor of the right Labium Externum, in a married Woman, aged twenty-two Years, the mother of one Child three Years old.—Convulsions from suppressed Eruptive Disease in a little Boy three Years old.—Ulcerative Carcinoma of the Uterus in a married Woman, aged forty-two Years, the mother of seven Children, the youngest five Years old.—Hæmostatic properties of the Perchloride of Iron.—Retention of Urine in an Infant, aged three days.

GENTLEMEN.—The diseases of the nervous system in infancy are of such frequent occurrence, and oftentimes so fatal in their termination, that they merit more than ordinary consideration. You will be engaged in practice but a short time before called upon to treat this character of disease, and it, therefore, becomes you to study faithfully this interesting chapter of infantile maladies. You have seen in the Clinique a great variety of diseases, sometimes originating in the nervous centers, and again, affecting these centers in a secondary manner. In both instances, you have witnessed the different abnormal phenomena consequent upon these derangements, whether centric or eccentric, of the nervous system. In one case there will be convulsions; in another, hemiplegia; in another, paralysis; in another, paraplegia, etc. In a word, these derangements of the nervous system may be considered endless in variety, assuming almost every different phase, and requiring, therefore, on the part of the practitioner, the most minute attention, in order that erroneous opinions may be avoided. In my judgment, the advances of physiology, though recognized in almost every department of the profession, are in no particular more strikingly illustrated than in the light they have shed on the nervous diseases of infancy. But comparatively a few years ago, and how shrouded were these affections in mystery—how embarrassing their diagnosis—how false their treatment! Now, where is the mystery—where the embarrassment? They have yielded to the sound progress of science—they have fallen before the strength of truth. If formerly

convulsions and other nervous phenomena were traced exclusively to disease of the brain, it was because of the imperfect knowledge which existed at that time respecting the true functions of the cerebral mass, and of the ignorance that prevailed touching another department of the nervous system, which exercises, if not a specific, at least a controlling influence during the early periods of infantile existence—I allude to the spinal cord. If I might be permitted to say so, I should denominate the spinal cord the essential nervous center of the infant. It is the center to which the attention of the practitioner should be constantly directed in his investigations of the morbid phenomena so frequently occurring during the early periods of life—not that the brain is not also worthy of consideration, as being oftentimes either directly or indirectly involved in many of the disorders of infancy—but I would have you look to the spinal cord as, in many cases, the only source from which you can derive reliable data for the explanation of numerous derangements of the nervous system.

The infant before birth may be regarded as enjoying an existence purely vegetative—the ganglionic system, which you know presides over the functions of organic life, being the only portion of the nervous mass called into active display. The result of this exclusively organic or vegetative life is the rapid development of the fabric—this development being the necessary result of healthy and uninterrupted nutrition. The instant, however, the child is born—and frequently before the entire body has escaped from the maternal organs—another portion of the nervous system is put under contribution, and it is through its aid alone that the first physiological act of the new-born child is performed—it is the act of respiration, which is accomplished through the influence of the spinal cord. The first gasp, then, of the infant is a physiological movement, produced by the spinal cord, and this is the result of an excito-motor impulse, which has acted on the medulla oblongata. How beautiful, and yet how simple is this first effort of independent life! The very act is a key to that series of numerous and interesting phenomena, both normal and abnormal, which are more or less constantly observed during individual existence. The respiratory effort is one of reflex origin—that is to say, an influence is exercised on the peripheral extremity of one or more nerves, which is instantly transmitted to the spinal cord, whence is generated a motor impulse conveyed from the spinal cord to certain muscles which, obedient to nervous power, are thrown into contraction. The excito-motor nerves through which the motor impulse from the spinal cord, resulting in respiration, is produced, are—the trifacial, spinal, and pneumogastric. It is through the latter nerve that respiration is ordinarily carried on after the function has once become established; but the first respiratory effort of the new-born infant is principally through the excitor influence of the trifacial, or fifth pair. As soon as the infant is born, the surrounding air imparts an impression to the cutaneous

branches of this nerve. This impression is carried to the medulla oblongata, and a motor influence immediately conveyed to the muscles connected with respiration. These contract, and the function is established.

This is the accepted physiological explanation of the first respiratory movement, and from this explanation you derive a most important therapeutic principle, viz., that the remedy for asphyxia in the new-born infant is the prompt stimulation of the peripheral extremities of the respiratory nerves, so that through the effects of this stimulation on the spinal cord a motor impulse may be imparted to the respiratory muscles. This will ensure their contraction, and on this depends the act of respiration. You see, therefore, that the first act of independent life in the infant—respiration—is derived from the spinal cord, and also the first disease of the new-born infant is the result of inaction of this same nervous center. But let us proceed a step further, and we shall have abundant evidence that, in the investigation of the nervous affections of infancy, we should be in the constant commission of error if we lose sight of that important nervous center—the spinal system. One of the great facts of modern physiology—a fact which has removed the obscurity which formerly existed, and which has led to sound therapeutical applications is this—that in all convulsive diseases the spinal cord is more or less involved, or, in other words, that spasmodic affections can not exist other than as the effect of derangement, either organic or functional, of the spinal system. What a precious fact, and what a contrast does it institute between the physiology of the present and past! If, however, we have a better physiology now than formerly, or if the laws of this beautiful science are better understood, it follows as a necessary consequence that we must have a sounder and more rational therapeutics; for to the medical man the value of physiological principles is in direct ratio to the aid they afford him in the treatment of disease.

If, then, it be demonstrated that convulsive affections owe their existence to disturbance of the spinal system, either directly or indirectly, you will cease, in these affections, to look to pure disease of the brain for the explanation of the convulsive spasm. But you may ask if it be true that convulsions necessarily pre-suppose disturbance of the spinal system, how do you explain their existence in cases in which the brain is primarily affected, and in which there is no apparent disease of the spinal cord? This question Marshall Hall, to whom is due the credit of having been the first clearly to elucidate the true functions and pathology of the spinal system, satisfactorily answers in the following manner: The brain when primarily affected, may give rise indirectly to convulsions, but when these take place under such circumstances, it is either because of irritation or counter-pressure on the medulla oblongata. You have seen in the Clinique, and you will often see in practice, convulsive spasms in hydrocephalus, etc. These are the result of pressure on the medulla oblongata. In connection with this subject, I might recall to your minds

what I have elsewhere stated to you—that convulsive diseases are extremely common in early infancy. They become less so, however, as the child advances in life. This is a fact which you can not be content simply to recognize as a fact. You will, as students in search of demonstration, necessarily ask why is this so? In early infancy, the medulla spinalis appears to hold the sovereignty in the nervous system—the brain at this period occupying a secondary position; but, through the rapid and successive developments of the cerebral mass, the medulla spinalis becomes, as it were, under a measured subjection, and causes, which would otherwise produce irritation, become now to a certain extent inoperative—hence the greater frequency of convulsive diseases in early life. But, gentlemen, there is something more to be said of the medulla spinalis as a nervous center. It is not only the true source of respiratory movement, and, under morbid influence, the seat of convulsive diseases, but it is the great excito-motory organ of the economy. It enjoys a perfect independence of the brain, and is the absolute center of vital action; or, if you please, life can not be perpetuated when the spinal cord is destroyed.

Those of you whose attention has not been particularly directed to this subject might, perhaps, express surprise, if, indeed, you did not manifest more than ordinary incredulity at the statement, that an infant born without cerebrum or cerebellum is capable of breathing, crying, taking its parent's breast, and performing other acts connected with life. But while the researches of the physiologist have established this fact beyond a peradventure—they have gone further, and demonstrated that without the spinal cord, no matter how perfect may be the cerebral mass, life can not be maintained, for the reason that the two essential functions of the economy, respiration, and, consequently, circulation, on which the various organic functions depend, are results of the reflex action of the medulla spinalis.

You can not, therefore, but appreciate the importance of this nervous center, not only as the source of those actions constituting life, but also as the source from which emanate the numerous disturbing influences, which derange and impair the human mechanism. Without a knowledge of the functions of the spinal cord, we should be at a loss to explain the various morbid phenomena constantly presenting themselves not only in the affections of infancy, but also in that interesting department of your studies—the diseases peculiar to women. How often have I called your attention to the physiology of the spinal system in connection with the subject of parturition, and how plainly have you seen that child-birth is but another of those operations of the physiological law which are constantly presenting themselves to your observation? Again, without a knowledge of the functions of the spinal cord, you can not understand the various forms of paralysis which so often occur in childhood, nor can you explain why, under the influence

of intestinal irritation, an infant will sometimes lose the use of its lower limbs, constituting paraplegia; how, too, ignorant of the functions of the medulla spinalis, can you comprehend the connection between the irritation of teething, or the sudden recession of exanthematous diseases, etc., and convulsions? This subject, gentlemen, is susceptible of almost infinite development; but our cases demand attention, and we must conclude.

LARYNGISMUS STRIDULUS IN AN INFANT, SEVEN MONTHS OLD.—Mary H., aged seven months, is brought to the Clinique by her mother, who says her little infant has been for the last month attacked, on several different occasions, with a peculiar kind of breathing, giving rise, as she expresses it, to a sort of crowing sound. The attacks, she says, come on quite suddenly, and cease quite as suddenly. The child, in the interval of attack, is apparently in good health. The mother observes that the child sometimes during the attack turns blue in the face, and appears as if it had lost its breath. "What was the state of your child's health, my good woman, before you noticed this crowing sound of which you speak?" "Its health was good, sir, except that its stomach was not in order; it used to be quite uneasy, and, after crying, it would vomit." "What did it vomit, madam?" "It looked lumpy, sir, like curdled milk." "Were its bowels affected, as well as its stomach?" "Yes, sir, its bowels were a good deal disordered. It would sometimes be bound, and when I gave it medicine, it would pass whitish-looking lumps." "Do you nurse your infant?" "Yes, sir." "Do you give it any other nourishment than breast-milk?" "No, sir." "What was the state of your own health at the time of which you speak?" "My health was good, sir; but I was worried in mind. I lost my sister, and that caused me to fret a great deal, sir." "Did you lose your sister before your infant began to vomit?" "Yes, sir; and I always laid the sickness of my child to my fretting so much." "You are not far from right in this opinion, my good woman."

You have before you, gentlemen, a case of disease which has been described by authors under a variety of names, such as laryngismus stridulus, spasmus glottidis, croup-like convulsions, child-crowing, asthma laryngeum, etc. It is an affection of early infancy, not as rare in its occurrence as some writers affirm; and in its simple or uncomplicated form, it is not a disease of danger. It frequently, however, is accompanied with convulsions, and, under these circumstances, the life of the infant is in more or less peril. These convulsions may be general, or confined to the extremities, in which case they have received the name of *carpo-pedal*. This affection consists essentially in a spasm of the glottis; and the violence of the symptoms is in proportion to the character of the spasm. In the more formidable cases of the disease, in which there is closure of the glottis, asphyxia and convulsions ensue, and death is often the con

sequence. It is not unusual for the disease to continue for weeks and months, always, however, with more or less intermission. There is an interesting peculiarity connected with laryngismus stridulus—it is that it is apt to attack several children in the same family. As the affection is essentially a neurosis, may it not be that this grouping of the disease in families arises from a constitutional nervous susceptibility? Some writers have supposed that laryngismus stridulus is the result of an enlargement of the thymus gland; but researches have very fully demonstrated that such is not the case; and, moreover, when enlargement of the thymus is recognized in this affection, it sometimes is a mere coincidence, and frequently an effect rather than the cause of the disease. Indeed, if we are to rely on that accurate basis for opinion, *post mortem* examination, it appears well established that this affection is not one of organic lesion, either of the larynx or trachea; it is essentially a neurosis, produced by reflex action, and may be, as a general rule, classed among the eccentric nervous disturbances. It is, in a word, a disease of irritation—this irritation, striking the peripheral extremities of some of the respiratory nerves, is transmitted through the excitor branches to the medulla oblongata, whence arises a reflex influence through the motor nerves, which centers itself on the glottis, causing more or less contraction, and, consequently, momentary impairment of the respiration, partial or complete; in the latter case, asphyxia ensues. The child, when the disease proves fatal, dies either from asphyxia or convulsions, the latter being often accompanied by coma.

Causes.—Undigested food, intestinal irritation from any source, dentition, sudden fright, cold, may all be classed among the causes of this affection.

Symptoms.—Laryngismus stridulus is a paroxysmal disease, marked by distinct intervals. It is sometimes gradual in its progress, the only symptom being for some time occasional dyspnoea; usually, there is a peculiar crowing sound, and, in the more severe attacks, asphyxia and convulsions.

Diagnosis.—The affection with which this disease might possibly be confounded, is croup; but no error can arise with ordinary vigilance, for the two maladies have their own special and distinct phenomena.

In croup, there is fever, and also the husky voice, together with cough, but no spasmodic contractions of the muscles of the extremities. Croup, too, if not checked, soon reaches its maximum point of danger. In laryngismus, on the contrary, there is no fever, nor is there any cough; uncomplicated, it does not become dangerous to life for several weeks or months. The asphyxia and convulsions, which accompany it in its more formidable attacks, will also serve to distinguish it from laryngitis.

Prognosis.—In its simple form, it is not a dangerous malady; it becomes so, however, when accompanied by asphyxia, convulsions, or coma.

Treatment.—The treatment of this disease must depend on the circumstances which may exist at the time your services are required; for instance, you may be called to an infant who is laboring under asphyxia, and secondly, you may be called upon during the interval of attack. In the former case, you must promptly have recourse to those remedies which are known to be most effective in removing the state of asphyxia, the continuance of which must of necessity lead to death. The instant you see the child, you should throw cold water on its face and head, for reasons which we shall immediately explain. Hot flannels should be applied to the chest, the extremities kept warm by mustard cataplasms; and it will also be advisable to inject into the rectum warm water, with either brandy or assafoetida. Should you, however, see the child in the interval of attack, you must sedulously endeavor to ascertain the particular cause which has given rise to the disease. Is it dentition, intestinal irritation, cold, etc.? These are the questions which you are to address to yourselves, and on their proper solution will mainly depend the safety of the child. I ask you now to revert to the conversation which has just taken place between this woman and myself, see what her statement has developed, and then tell me whether the cause of the laryngismus in the case of this little infant is not manifest? Does she not tell us that the first symptoms of disease which she observed in her child was vomiting and disordered bowels, and also that the child was in good health until the death of her sister, which caused her to fret, etc.? What inference do you deduce from this simple but significant statement? It is this—that the fretting at the death of her sister deranged her milk, which was no longer suited to the infant, and the consequence was vomiting and disordered bowels. I have frequently directed your attention to the important influence of mental emotion on the human milk, and to the morbid effects transmitted in this indirect manner to the nursing infant. The indication, then, in the present instance, is to regulate the bowels of the infant, and to substitute in place of the disordered milk a bland diet. In this way, we shall remove the exciting cause of the laryngismus, and restore the child to health. It should be weaned, or another nurse procured; if weaned, the infant should be fed exclusively with two third parts of cow's milk, and one third water, well sweetened. The following powder to night, and in the morning a tea-spoonful of castor oil:

R Hydrarg. c. Creta gr. ij

Should the excretions still continue of a whitish color, it will be proper to administer occasionally $\frac{1}{2}$ grain of the Hydrarg. c. creta, in order to act gently on the liver. This treatment will place the digestive functions in proper condition. Much, however, will depend on the fidelity with which the dietetic directions are observed.

ASPHYXIA—ITS MEANING, ITS CAUSES, AND TREATMENT.—You will

frequently, gentlemen, meet with cases of asphyxia, and it is important that you should understand its causes and treatment. The term asphyxia is a bad one, for the reason that it does not convey a true idea of its meaning—it is derived from two Greek words, *σφυξις*, the pulse, and *α* privative, which literally signify without pulse. You see, therefore, that this definition of the word gives but a very inadequate idea of its true import. Asphyxia, in truth, is that condition of system consequent upon impeded respiration; and as I have remarked to you, the respiratory process may suffer derangement from several different causes, and in various degrees. Carbonic acid gas, carburetted hydrogen gas, submersion, and strangulation or hanging, are all so many causes of asphyxia. Again, you may have asphyxia in a case in which the respiratory process has never been established, and this often occurs in a new-born infant. The physiologist has proved that respiration is dependent upon the excito-motory system, or, in other words, upon the spinal cord. It is an excited act, and the first effort of the new-born infant to breathe, is perhaps induced by the stimulus of the atmosphere acting upon the cutaneous branches of the trifacial nerve. You see, therefore, how important it is to attend to the direction which I have so often enjoined upon you in my lectures on midwifery, viz.: to allow a free access of air to the face of the child, as soon as it has passed through the maternal organs.

This can be done without in any way unnecessarily exposing the person of the mother. Many an infant has been sacrificed by the omission of this simple but fundamental rule. But it often happens that the mere exposure of the face of an infant to the atmosphere is not sufficient to induce respiration—asphyxia ensues, and the question now is, what are you to do in order to remove it, and save the child? The course to pursue is a very plain one, and is as follows: 1st. Examine speedily the condition of the mouth, and ascertain whether the larynx is obstructed either by a collection of mucus, or any other substance; if so, remove it without a moment's delay—the best mode of doing this is to introduce into the mouth of the infant the small finger, and by a gentle scoop you will be enabled to clear away whatever may have obstructed the access of atmosphere to the lungs; 2d. If there be no mechanical obstruction, cold water should be dashed on the face with a view of acting on the medulla oblongata, and thus inducing a motor influence from it to the respiratory muscles. Should cold thus applied to the face not suffice to accomplish the purpose, then dip the entire body of the child alternately into cold and warm water—this alternation of warmth and cold exercises a very remarkable influence on the cutaneous nerves, by imparting to them a decided stimulus. It is necessary, however, that the temperature of the water should be very low and very high, 35° and 100°. The trunk and limbs of the infant should be kept in the warm water about one minute, and in the cold water from fifteen to twenty seconds.

Should these efforts not prove successful, then recourse may be had to artificial respiration, which consists simply in blowing air from your own lungs into the mouth of the child. After each inflation, the chest of the child should be gently compressed with the hand, in order that the air may be expelled from the lungs.

The extremities should be kept warm by means of friction, hot flannels, or mustard cataplasms rolled in folds of old linen, and while these points are being attended to, it will be useful to throw warm water into the rectum, mixing with the water either assafoetida or brandy; the stimulating effect of the enema is sometimes followed by prompt and decided benefit. These are the directions which, under ordinary circumstances, you are to pursue in cases of asphyxia in the new-born infant. But many of you may, perhaps, desire to know the motive for this treatment, or you may be disposed to inquire whether it is purely empirical, or whether it is based on a scientific foundation. You have already been told that the respiratory movement is the result of an impression made upon the medulla oblongata, by the trifacial, spinal, or pneumo-gastric nerves; this impression being conveyed from the peripheral extremities of these nerves to this nervous center, and as soon as this latter receives the impression, it immediately transmits, through another set of nerves passing from the spinal cord toward the circumference, a motor influence, which induces muscular contraction. This is what is known as reflex movement; when normal, it constitutes the healthy working of the mechanism; when abnormal, it results in various derangements, and oftentimes in convulsions. With this explanation, you can not be at a loss to appreciate the reason for the treatment just suggested.

Permit me here to remark that the faculty of resisting asphyxia, that is, of living without breathing, is very much greater in the new-born infant than in the adult, so that if a child should not breathe for half an hour or more after birth, it should not be abandoned as dead, and beyond remedy. Cases are recorded in which resuscitation has been accomplished by some of the means just alluded to, and more particularly artificial respiration, even after the asphyxia had continued for a long time. Another important fact is this: a newly-born infant affected with asphyxia should not be considered dead because its heart has ceased altogether to beat; for it has been demonstrated by Brachet of Lyons, Josat, and others, that life may be restored after the pulsations of the heart have ceased for more than five minutes. This ability in the new-born infant to resist asphyxia, explains why, in cases of death of the mother, the child may be extracted alive from the uterus, through the Cæsarean section, even after the patient has been dead for a longer period than half an hour. Dr. Brown-Sequard has pointed out that, in these cases of post-mortem Cæsarean section, if the mother die when the body is quite warm, the life of the child is in more hazard than when the body has become somewhat cold previous to dissolution.

MUGUET IN AN INFANT, TEN MONTHS OLD.—William W., aged ten months, is brought to the Clinique on account of a sore mouth. "How long, madam, has this child had a sore mouth?" "For the last two weeks, sir." "What was the state of its health before that time?" "Very bad, sir." "What was the matter with it, madam?" "It took the diarrhoea, sir, lost its appetite, and refused the breast." "How is the diarrhoea now, my good woman?" "It is quite cured, sir; and if he could only have something for his mouth, I am sure he would get quite well again." "Well, madam, we will give you something to cure his mouth." You have had before you, gentlemen, in the Clinique, many cases of sore mouth in children, and you know that this affection which is called stomatitis is divided into several varieties. We have, for example, the follicular stomatitis, the ulcerative and gangrenous, and also another form called the mercurial stomatitis. In the case before us, we have an instance of muguet, a variety of sore mouth to which your attention has not heretofore been particularly directed. At one time aphthæ or the thrush was considered merely a mild form of the muguet; but this latter affection has recently, through the investigations of the microscopist, been fully developed, and it is now proved that between the two affections there exists no identity. Muguet is a species of stomatitis characterized by a whitish exudation covering more or less the mucous membrane of the mouth.

The old writers described this disease under another name, as an ulceration of the digestive mucous surface, while the moderns have regarded it as a simple inflammation of the mucous surface of the mouth, followed by a pseudo-membranous or diphtheritic deposit. The researches of Berg and Gruby, however, have shown that the whitish material constituting the essential point in muguet is not a diphtheritic deposit, but that it results from the production of a parasitic plant within the epithelial cells—the *alga*. Charles Robin has described this plant as being composed of variously ramified tubulous filaments crossing each other in every direction, and in adhesion with the external surface of the epithelium. It is also said that a circumstance favorable to the production of this infusorial plant is an extreme acidity of the mouth. The experiments of Dutrochet appear to have shown that a liquid acid facilitates the development of infusorial vegetation; and Gubler maintains that the secretion of saliva, which is alkaline, is suppressed in muguet. He contends, also, that the presence of atmospheric air is necessary for the growth of this parasitic plant. Gubler, I think, was the first to direct attention to the fact that this vegetable is developed in the follicles of the mucous membrane of the mouth—that it then escapes through the orifices of these follicles, and presents itself on the surface under the form of a milky-white material. Occasionally, however, on account of the contracted size of the orifices, the escape does not take place, and in this case the walls of the gland become greatly distended,

constituting sub-epithelial tumors. It has been stated that muguet is sometimes developed while the child is *in utero*; but this is contrary to the opinion of Gubler and Dutrochet that atmospheric air is necessary to its production. A question of some importance has arisen in connection with this disease, viz.: whether it is constitutional or local. Authors are much divided on this subject. Trousseau is of opinion that it is altogether a local affection, while Valleix and others impute to it a constitutional origin. In this latter opinion I fully concur for the two following reasons: 1st. Muguet is either idiopathic or symptomatic; the former is comparatively rare, while the latter, on the contrary, is of frequent occurrence. Idiopathic muguet, I admit, will occasionally develop itself, unaccompanied by the slightest organic lesion; but the child, though no appreciable disease may exist, will be found to be feeble and delicate, indicating a want of healthy tone in the system; 2d. Muguet, in the great majority of cases, is symptomatic, or in other words, is the effect of previous disease, and is frequently observed in the various chronic affections of infancy; and it is likewise not uncommon to recognize it as a prelude to death. In a word, it is not only in exhausting diseases, but also in a cachectic constitution that this affection usually develops itself. Again, muguet is generally—though not always—preceded by diarrhoea and fever, together with more or less erythema about the breech and thighs. For these reasons, therefore, I believe it to be not a local, but a constitutional disorder. Muguet, although more frequently observed in infancy, is not confined to this age—it occurs, also in the adult; but according to the best observers, never as an idiopathic, but always as a sympathetic affection. Much has been said about the contagious character of this disease, and writers are far from being united on this question. While some maintain that it is an infectious disease, others, among whom are Billiard, Trousseau, etc., say that it has the power of transmission only by direct contact. This, perhaps, is the true view of the subject.

Causes.—There is, perhaps, no more fruitful predisposing cause of this affection than impoverished or unsuitable food. Girard of Marseilles and Donnè have found that, of all the ingesta, impure milk is the most certain generator of muguet. Bad air, confinement in crowded apartments, constant exposure to a humid atmosphere, and the various privations incident to poverty are so many influences capable of facilitating the origin of this disease.

Symptoms.—This affection is characterized by certain local and general phenomena; the former constituting the changes observed in the mouth, such, for example, as increased redness of the mucous membrane, enlargement of the lingual papillæ, an acid secretion, and a creamy substance spread more or less over the mucous surface. The general symptoms are fever, diarrhoea, erythema, of the thighs, breech, etc. In symptomatic muguet, which is simply the result of other affections, both

acute and chronic, there is no uniform series of symptoms, for the reason that the symptoms will be those of the particular diseases which have preceded this affection.

Diagnosis.—It is by no means difficult to distinguish muguet from other inflammations of the mouth. In aphthæ, or follicular stomatitis, there is no pseudo-membrane, but you will detect small vesicles. In the mercurial stomatitis the cause is usually known, and, also, there is no pseudo-membrane. The pseudo-membrane of muguet is preceded, in its formation, by the appearance of small whitish points; and lastly, this affection is distinguished by the peculiar parasitic plant found in no other form of stomatitis.

Prognosis.—Muguet, uncomplicated, is not dangerous. We have already remarked that it usually attacks feeble children; and, in the great majority of cases, it is the sequela of various grave affections. Some writers say that it is an extremely fatal disease; but when you examine their statistical tables, you will discover that they do not speak of muguet as being fatal by itself—but muguet, which has developed itself as a complication of certain fatal disorders. In these cases, therefore, it is wrong to deduce the conclusion that this disease usually destroys life. Death, under such circumstances, is due not to the affection itself, but to the gravity of the diseases which had a previous existence, and of which it was simply a consequence. Bouchut mentions that of forty-two patients at the Hospital Necker, fourteen were affected with idiopathic muguet, and all recovered. Among the others, this disease was symptomatic of some visceral affection, and twenty died as follows: twelve had chronic enteritis; four acute enteritis; three pneumonia, and one hydrocephalus. It will certainly not be contended that these twenty children died of muguet; the *post hoc, ergo propter hoc* doctrine will not obtain here, for it is utterly without application, the *propter hoc* being an illogical sequitur.

Treatment.—In idiopathic muguet, minute doses of magnesia occasionally administered will be of service; and, as a local application to the mouth, the following, in most cases, will be all that is required:

℞ Borat Sodæ	gr. xij
Sacchar. Alb.	gr. xij M.

Sometimes, however, it may be necessary to have recourse to a more powerful agent; and in such case, touching the affected parts with the nitras argenti, or employing a solution of alum, will be of service. In symptomatic muguet, on the contrary, the indication will be to apply your remedies to the disease, of which this affection is but a result. The child, when not contra-indicated, should have a bland nutritious diet. Among other remedies, in a cachectic and feeble system, I have great confidence in the use of the following:

℞ Decoct. Sarsaparillæc.	℥ ij
Liquor Potassæ	gtt. xx M.

A tea-spoonful twice or thrice a day.

PROLAPSUS OF THE MUCOUS MEMBRANE OF THE VAGINA IN A MARRIED WOMAN, AGED TWENTY-SEVEN YEARS, THE MOTHER OF THREE CHILDREN.—Mrs. T., married, aged twenty-seven years, complains of a tumor in her front passage, which she says protrudes when she walks, and gives her much uneasiness. “How long, madam, have you noticed the tumor, as you call it?” “Ever since the birth of my last child, sir.” “How old is that child, madam?” “Four months, sir.” “Was your labor a difficult one, my good woman?” “Yes, sir, I was in labor four days, and suffered much more than I did at the birth of either of my other children.” “Did you leave your bed soon after delivery?” “Yes, sir, I was obliged to leave my bed the day after my child was born, for I had no one to see after things for me.” “What was the state of your bowels before and after the birth of your child?” “Always confined, sir.”

I shall not ask this patient any more questions, for she has told us sufficient to account for the difficulty under which she labors. There is one point of special interest about her case, and it is the fact that she says she has a tumor projecting, when she walks, from her front passage. I have often admonished you to take the statements of your patients for what they are really worth, and for nothing more. You are not to permit their notions of disease to govern you in your judgments. They see through false media, and consequently they fall short of the truth. You, on the contrary, are to contemplate disease, and judge of its nature through the evidence it presents. What, then, will be the course for you to pursue in order to decide whether this woman really has a tumor projecting from her front passage? In no other way than by an examination can this fact be arrived at. This examination I have made, and find there is, when she stands or walks, a projection from the vagina—and it now remains for us to determine its true character. Is it a prolapsed uterus, a polypus, a prolapsed bladder, etc., or is it something else? It certainly is a matter of some moment to this patient that the question should be satisfactorily solved. [Here the patient was placed on the bed, and the Professor called the attention of the Class to the supposed tumor. In the recumbent position it did not protrude, but on coughing, the protrusion was quite manifest.] This, gentlemen, is another example, of which you have already seen several in the Clinique, of prolapsion of the mucous membrane of the vagina. You will occasionally meet with it in practice, and it is important that you should not confound it with the various other enlargements which sometimes exist in this part. Child-birth is often the cause of this form of prolapsion through the relaxation it produces in the walls of the vagina; and constipation you will find to be one of the commonest exciting causes. The first point to be attended to in the case before us is the removal of the constipation, and when the bowels have become regular, you will have to rely on astringent washes, with a view of overcoming the relaxed

state of the vagina. This woman can not afford to keep her bed, and thus derive advantage from the recumbent position; you will, therefore, be limited in your local treatment simply to those applications best calculated, under the circumstances, to restore the lost tonicity of the vagina.

Two of the following pills may be taken at night, as circumstances may require:

R	Pulv. Rhei	3j
	Saponis	℥j
	Aquæ	q. s.
<i>Ut Ft. Massa in pil. xx div.</i>		

The following lotion should be freely applied to the vagina:

R	Sulphat. Zinci }	
	Aluminis }	aa 3j
	Decoct. Quercus.	Oj
<i>Ft. sol.</i>		

Should the above treatment fail, and in the event of the protruding membrane interfering with the ordinary avocations of the patient, recourse can then be had to a surgical operation, by which the prolapsed membrane may be removed. The operation consists in grasping the fold of the vagina with a pair of small forceps, and then removing it by means of a circular incision with the scissors. The operation is a simple one, but before making the incision, care must be exercised that nothing is contained within the vaginal fold, for sometimes there may be a portion of intestine, prolapsed bladder, etc.

THROMBUS, OR SANGUINEOUS TUMOR OF THE RIGHT LABIUM EXTERNUM, IN A MARRIED WOMAN, AGED TWENTY-TWO YEARS, THE MOTHER OF ONE CHILD, THREE WEEKS OLD.—Mrs. L., aged twenty-two years, married, the mother of one child, three weeks old, says she has a swelling in the lower portion of her person, which causes her much pain, and prevents her from attending to her ordinary duties. “How long, my good woman, have you had the swelling of which you speak?” “Ever since the birth of my child, sir.” “You are certain you did not have it before its birth?” “Indeed, I am, sir.” [Here the patient was placed on the bed, and the Professor made a critical examination of the tumor, which involved the entire right labium externum, and was half the size of an ordinary foetal head.]

This, gentlemen, is an interesting form of tumor, which you will sometimes meet with in practice, and its seat will occasionally be in the vulva, and at other times in the vagina. It is extremely important that you should not confound this character of enlargement with other tumefactions, which, under certain circumstances, will develop themselves in these parts. The swelling before us is what has been called a *thrombus* or *sanguineous tumor*, which results from the extravasation of blood in the surrounding cellular tissue, differing in this respect from the *varicose*

tumor, in which the blood, while it is the cause of the enlargement, is not distributed in the cellular tissue, but is contained within the vessels. A thrombus may appear in the unmarried, in the married who have not had children, during pregnancy, at the time of labor, and subsequently to parturition. This can not be considered an affection of frequent occurrence, and yet it is your duty thoroughly to comprehend every feature connected with it.

Although thrombus may appear in the female almost under any circumstances, it is most commonly connected with pregnancy and parturition, and you can without difficulty understand why these two conditions should predispose to the formation of this species of tumor—it is because of the obstructed circulation in the lower extremities, occasioned by the pressure of the uterus; and, moreover, in some cases, the enlarged veins, especially in the latter months of gestation, will burst, either of their own accord, or from external violence, thus giving rise to more or less extravasation of blood in the cellular texture of the vulva or vagina. For the reason that the obstruction in the circulation is insignificant in the earlier months of pregnancy, thrombus is of rare occurrence at that period, whereas it is comparatively much more frequent in the latter months, and particularly during and after delivery. It may happen that the rupture of the vessels, resulting in extravasation, may take place during labor, but the fact may not be known until some days after delivery, because the head or presenting portion of the foetus may have acted as a sort of tampon, thus preventing the immediate formation of the tumor. It is not surprising that both pregnancy and parturition should strongly predispose to the birth of these sanguineous infiltrations, for you are aware that in these two conditions of the puerperal state, the parts undergo important modifications, both anatomical and physiological. The organs immediately concerned in gestation not only become the center of an increased afflux of fluids, but these fluids, as already explained to you, are extremely liable to obstruction in their circulation—hence arise engorgement, dilatation of the venous trunks, varicose enlargements, etc. Here, then, we find every thing in readiness for a rupture of these vessels, and it needs only the application of one or other of the numerous causes capable of producing the extravasation, to have the formation of a thrombus.

Causes.—The causes of thrombus may be divided into predisposing and exciting—among the former may be enumerated the various modifications incident to pregnancy and parturition; a contracted pelvis, deformity of the soft parts, twin pregnancy, etc. The exciting causes consist in falls, blows, external violence of any kind, rude manipulation on the part of the accoucheur, forceps delivery, pressure of the presenting portion of the foetus, coughing, vomiting, etc.

Symptoms.—A primary and prominent symptom of thrombus is pain, which arises no doubt from rupture of some of the blood-vessels, and

also from pressure on the adjoining nerves. There is also tumefaction to a greater or less extent, sometimes large at the very commencement, and again requiring several hours or days for its full development. In certain cases in which the thrombus is very large, it may impede the birth of the child, or the expulsion of the placenta, and instances are recorded in which retention of the urine and fæces ensued from pressure of the tumor on the bladder and rectum. Occasionally, the thrombus will suddenly burst, giving rise to profuse and dangerous hemorrhage. The color of the skin, soon after the formation of the swelling, assumes a livid or bluish cast, and this is an important point connected with the diagnosis of this form of sanguineous engorgement. The blood in these tumors, mixed more or less with pus under inflammatory action, will sometimes emit a distinct stercoral odor, and in such cases you must be careful not too hastily to conclude that the thrombus is complicated with a recto-vaginal fistula. Surgeons have established the fact—an interesting one for the accoucheur—that in abscesses situated in the vicinity of the rectum, it is quite usual, without any communication with the intestine, for the purulent secretion to possess the odor of fæcal matter.

Diagnosis.—Although to the careful practitioner, the diagnosis of vaginal or vulvar thrombus presents no embarrassment, yet it has sometimes occurred that it has been mistaken for other affections—such, for example, as incipient abscess, varicose tumor, cedema of the labia, hernia of the bladder, omentum, or intestine, inversion of the vagina or uterus, etc. A thrombus, as a general rule, is characterized by rapid development, pain, the peculiar bluish color of the skin, and hardness of the tumor when the blood is simply infiltrated; while, on the contrary, there is distinct fluctuation when collected in the form of abscess.

Prognosis.—The prognosis of this affection is far from a favorable one; when death ensues it is most frequently caused by the profuse hemorrhage either external or internal, sometimes, too, by the exhausting effects of suppuration, by gangrene, inflammation of the adjoining organs, and more especially of the peritoneum. Thrombus may terminate in various ways: 1st. In resolution; 2d. In suppuration; 3d. In rupture, and consequent hemorrhage; 4th. In gangrene, and sometimes in the formation of encysted tumors of the vulva and vagina.

Treatment.—The particular treatment of this form of tumor will necessarily depend upon the circumstances attending each case; for example, should you meet with a thrombus, during labor, of such magnitude as to interfere with the birth of the child, it will obviously be your duty to evacuate the effused fluid by a free incision, and then, in order to check any undue bleeding, you should have recourse to the tampon, unless the child's head should be low down in the pelvis, in which case the pressure of the head against the vessels will prove the best possible tampon. There are circumstances, however, in which it would be judicious to attempt the resolution of the tumor, either during gestation, or

after delivery; but it can scarcely be necessary to remind you that your efforts to accomplish this form of termination would be without avail, except in cases in which the effusion is limited, and the integuments unchanged by the progress of the swelling. The remedies most likely to effect resolution are blood-letting, repose in the recumbent posture, evaporating lotions, etc.

In the case before us, it is very evident that the tumor is too much developed to give us the slightest hope that it can be made to terminate in resolution. This patient is suffering from excessive pain, and the indication is plainly to allow an escape to the effused fluid by a free incision; and afterward, if necessary, to employ a tampon, which may consist of a soft sponge kept in place by a bandage. "My good woman, it will be necessary to open this swelling; will you allow me to do it?" "Yes, sir." "Then I will go to your house to-morrow and attend to it for you." "Thank you, sir." "I should open it at once, were it not for the inconvenience of your returning home."

CONVULSIONS FROM SUPPRESSED ERUPTIVE DISEASE IN A LITTLE BOY, THREE YEARS OLD.* John B., aged three years, was brought to the Clinique to-day by his mother, who reported him cured. The case of this little boy, gentlemen, is a very instructive one. You will remember he had several attacks of convulsions; on investigating fully his case, I came to the conclusion that the convulsions were produced by suppressed measles. I called your attention particularly to the connection between suppressed or badly developed eruptive disease and the convulsive spasm; and you were cautioned to examine critically into the various and multiplied causes of convulsive affections. In accordance with the view I took of this child's case, I ordered the following treatment: The child to be taken home, and put into a warm bath made a little stimulating by a handful of mustard; it should then be given every half hour, until the eruption is fully developed, a dessert spoonful of the following solution:

R	Liq. Ammoniacetate	.	.	.	.	.	℥iv
	Emet. Tart.	.	.	.	.	.	gr.j.
							<i>Fl. sol.</i>

The whole object of this treatment (as you perceive) was to direct to the surface, and develop the eruption, the poison of which in the blood acting upon the medulla spinalis was the cause of the convulsions. "Well, my good woman, did you follow the advice given you?" "I did, sir, and about an hour after I took him out of the bath, he began to break out with the measles." "Did you give him any of the medicine?" "Yes, sir, I gave it to him six times, and he was all covered over with the measles; and Dr. Beauchamp, who came to see him, told me I need not give him any more of the medicine." "That was right; I told you I would send you a good doctor to see your child, and I have kept my

word. Had he any more convulsions after the measles appeared?" "Not one, sir." This case is one well worthy of recollection.

ULCERATIVE CARCINOMA OF THE UTERUS IN A MARRIED WOMAN, AGED FORTY-TWO YEARS, THE MOTHER OF SEVEN CHILDREN, THE YOUNGEST FIVE YEARS OLD, WITH PROFUSE HEMORRHAGE.—HEMOSTATIC PROPERTIES OF THE PERCHLORIDE OF IRON.—Mrs. O., aged forty-two years, married, the mother of seven children, the youngest five years old, seeks advice for a profuse discharge of blood from her vagina, which she says comes on her sometimes in six or seven days, and sometimes once in two weeks, etc. She is extremely prostrate and pale. "How long, madam, have you suffered from these losses of blood?" "About three months, sir, and I am almost worn out, I am so weak." "Have you any pain?" "Oh! dear, doctor, I am a poor sufferer, I have no rest night or day with the pain." "Where do you feel this pain, my good woman?" "All around my hips and thighs, sir, and in my womb." "Have you sick stomach?" "Almost all the time, sir." "Have you had any doctor to attend you?" "Yes, sir, I had a doctor and he gave me some pills." "What did he say was the matter with you?" "He told me, sir, it was the 'turn of life,' and I would soon be well." "Have you any other discharge than that of blood?" "Yes, sir, I have a great discharge of matter nearly all the time."

This patient, gentlemen, presents a striking example of the necessity of caution in diagnosis on the part of the practitioner; she has been told, as you have heard from her own lips, that the loss of blood from her vagina, was "*nothing more than the turn of life, and that she would soon be well!*" What particular circumstance induced this opinion, I am sure I can not tell. The opinion was either a bare conjecture, without any investigation, or it was the result of an examination into all the facts connected with the case. If the former, the practitioner is guilty of culpable trifling both as regards his patient and his own reputation; if the latter, he is to be commiserated for his ignorance! Place him on either horn of the dilemma, and there he is an admonition as to the value and necessity of two elements in the character of the practitioner: 1st. Conscience; 2. Knowledge. What do you suppose is the cause of the profuse losses of blood and matter, and the excessive pain with which this patient has been affected for the last three months, and which have dilapidated her system to a most fearful extent? Revolve in memory the various causes which I have so often enumerated as being capable of giving rise to sanguineous discharges *per vaginam*, and then say which of these obtains in the present instance. In order to ascertain accurately the nature of this woman's malady, a vaginal examination is indispensable. This fact I communicated to her, and with her consent I have made the necessary examination. I find she is laboring under *ulcerative cancer of the uterus*, one of the most fearful and loathsome diseases in the catalogue of female

maladies. The pain she suffers is the general but not universal accompaniment of this affection, while the profuse losses of blood are but the melancholy proofs that the disease is making its fatal progress. As it proceeds in its destructive course, it involves tissue after tissue; and when it encroaches upon the blood-vessels, it lays them open, and hence the bleeding.

Treatment.—In this case, we shall be restricted entirely to palliative treatment; permanent restoration is a thing not to be looked for—the disease is in an advanced state, and bids defiance to human skill; all that we can hope to accomplish is to mitigate, as far as may be, the pain, and arrest the hemorrhage. For the former object, opium suppositories may be introduced into the rectum; thirty or forty drops of laudanum in a wine-glass of tepid water thrown up the vagina; or, to the sides of this passage, may be applied the belladonna ointment, $\mathfrak{3j}$ of the extract to $\mathfrak{3j}$ of lard. In cases in which I have completely failed in securing relief from pain by opium administered either by the mouth, or by injection, I have derived the happiest results from the application of the anodyne in the following manner: Place a small cantharides blister on the side of the lumbar vertebræ; when the blister has vesicated, dress it with the acetate of morphine, say two grains. This may be renewed according to the urgency of the case. It is a valuable, and I think too much neglected mode of employing this remedy. As an antiseptic, and also with a view of cleansing the parts, a decoction of carrots will be found useful, injected into the vagina once or twice a day; and I should also mention that arsenic, in the form of Fowler's solution, will sometimes have a very happy effect in soothing the pain, commencing with five drops two or three times a day, in a tea-spoonful of water. With a view of checking the hemorrhage, which is so exhausting in this disease, various remedies are employed, such as sulphate of zinc and infusion of rose-leaves, in the proportion of ij gr. to $\mathfrak{3j}$ of the infusion; alum, oak-bark in decoction, the tampon, etc. Dr. Remilly speaks highly of the efficiency of the perchloride of iron in arresting these bleedings. He records in the *Bulletin de Thérapeutique* some interesting cases in proof of the value of this remedy. He employs it in injection, and observes that, according to his experience, the perchloride not only relieves the patient of troublesome and offensive discharges, but that it retards the progress of anæmia, and prolongs life. We shall try it in the case before us, both on account of the authority, which is good, and the reasoning, which appears just. The following is the strength in which Dr. Remilly has employed the perchloride in injection:

R	Perchloride Ferri sol.	.	.	.	.	.	$\mathfrak{3}$ ss
	Aquæ distillat.	.	.	.	.	.	$\mathfrak{3}$ viij

On the appearance of the bleeding, two female syringesful of the solution to be thrown up the vagina at a time, to be repeated as circumstances may indicate. This patient's strength to be sustained by a

nutritious diet; and it would, perhaps, be well to give her, if the stomach will bear it, a tea-spoonful twice a day of the following tonic:

℞ Sulphat. Quinæ	gr. iv
Acid Sulph. Dilut.	gtt. iv
Syrup Zingiberi	℥ ij

Fl. Sol.

For the nausea, the almost uniform attendant upon the advanced stage of *carcinoma uteri*, benefit will often be experienced by placing a piece of linen saturated with laudanum on the epigastric region. I should have spoken to you of the chloride of soda as a valuable injection in this disease; it tends very sensibly to diminish the exhausting discharges both of blood and matter. It may be mixed with barley-water, two table-spoonsful of the solution to a pint of the water. I think I have observed, under the use of the chloride of soda, a marked mitigation of the pain, as well as a diminution, for the time, of the discharges.

NOTE.

There is much discrepancy of opinion respecting the propriety of the two operations—*embryotomy* and the *Cæsarean section*—in cases of pelvic deformity. In my recent visit to Europe, I was happy to have an opportunity of listening to a lecture on this subject by my friend Dr. Murphy, the distinguished Professor of Midwifery in the London University. Professor Murphy belongs decidedly to the conservative school of Obstetrics; and while he protests earnestly against an officious interference with the operations of nature, yet in case of need, when nature labors under difficulties insuperable to her own efforts, he inculcates the necessity of prompt and efficient aid. In his lecture, he instituted a comparison between the operation of the Cæsarean section and *embryotomy*. He gave the statistics of the two operations, so far as the mortality is concerned, and spoke with much point of the difference of opinion which prevails on this subject in Great Britain and on the Continent of Europe.

He differs with Davis, Clark, Osborne, and others, who advocate *embryotomy* in cases of extreme pelvic deformity, such, for example, as where there are not more than an inch, an inch and a half, or two inches in the antero-posterior diameter; and why it is that, in the present enlightened age, with all the melancholy experience of the past, there should exist any other opinion on this important question, I can not understand. Yet, strange to say, I will venture the assertion that Dr. Murphy is almost alone on this question on the western side of the channel; but while alone, he has both moral courage to advance, and mental vigor sufficient to maintain the wisdom of his views—views which are not only in accordance with facts, but which are in true keeping with the sacred duties of the practitioner. I was extremely interested in this lecture, for I found the opinions of Dr. Murphy on this vexed subject to be identical with those I advanced in 1843, in my edition of Chailly; and I regret to say that, in my own country, I am on this point in the same minority that Dr. Murphy is in Great Britain, and the consolation I derive in advocating a principle at variance with the general opinion of my professional brethren is portrayed in that memorable expression of our glorious Henry Clay, "Sir, I would rather be right than be President of the United States!"

LECTURE XXVI.

Attentions to the new-born Infant; Tying and cutting the cord; Washing; Dressing; Pins not to be employed; Examine the Infant to see if there be any Deformities; Infant not to be exposed to the Light; Dosing and Drugging—their fatal results; The Mother's milk the most suitable medicine and food for the new-born Child; the Colostrum—its properties; Cleanliness necessary to the health of the Infant; Dangers to the Mother who does not nurse her Child; Kiestine—Why found in the Urine of Pregnant Women; Albuminuria and Puerperal Convulsions—is there the relation of cause and effect?—Rachitis—how produced in the young Infant; Phosphate of Lime; Experiments of Dr. Mouriès; Opinion of Dr. Beneke. —Neuralgia of the Cervix Uteri in a married Woman, aged twenty-three Years, no Children.—Retro-Uterine Hæmatocele in a married Woman, aged thirty-four Years, the Mother of four Children, the youngest fourteen Months old.—Exploring Needle.—Convulsions and excessive Purging in an Infant one Month old, produced by the Mother's milk.—Cathartic properties of the Colostrum.—Suppression of the Menses, of nine Years' duration.—Amenorrhœa in a girl, sixteen Years of age—Danger of the indiscriminate use of Emmenagogues.—Retro-version of the Uterus in a married Woman, aged thirty-four Years.—Dysmenorrhœa; its connection with Uterine Displacements.—Sore Nipples in a Primipara from nursing.—Convulsions in a little Boy, two Years old, from excessive general Blood-letting.—Infantile Therapeutics.—General and local Depletion—Their comparative safety.—Neuralgia of the right Labium Externum in a married Woman, aged twenty-four Years.

GENTLEMEN: Among the various duties which will devolve on you in the lying-in room, there can be none of more interest or moment than those claimed by the new-born infant. The little infant, as soon as it leaves its mother's womb, is indeed a dependent being. It has no power of self-provision—no means of telling its wants—no ability to protect itself against the rudeness of the heartless, or the officiousness of the ignorant. Much of the suffering of the future child originates, I am sure, oftentimes in its mismanagement soon after birth; and I am equally confident that the majority of the deaths within the first month of existence are not only not deaths of necessity, but deaths which, on a close analysis, will be found traceable to the neglect of those simple rules, the faithful observance of which are so necessary for the comfort and well-being of the little stranger. I think, therefore, in calling your attention especially to these rules, I may, perhaps, perform both an acceptable and profitable service. After the infant has been separated from its parent by the application of the ligature and the cutting of the umbilical

cord, it should be received by the nurse in a warm flannel, and placed securely on the bed, where it should be suffered to remain until after the placenta has been expelled, and the mother comfortably bandaged, for the reason that the services of the nurse to the mother will be more or less necessary until these matters have been accomplished. Let me here caution you against a thoughtless practice too often adopted by the nurse, viz., that of placing the little infant in an arm-chair, instead of allowing it to remain on the bed. The comfortable arm-chair in the sick room is generally the favorite seat, and it has occurred more than once that some good old lady, of no equivocal weight, not dreaming that it is already occupied by an unoffending incumbent, selects this very arm-chair for the repose of her person, and if the infant be not crushed by the superincumbent pressure, it certainly will not be because carelessness had not thus early exposed it to the hazards of destruction. But we will suppose it has survived the shock, and shall now proceed to enumerate briefly the various cares the infant requires.

Washing.—The body of the infant, especially in certain parts of it, is usually covered more or less with an unctuous or sebaceous material. In order to remove this, I invariably direct the nurse, before using water, to pour some fresh sweet oil in her hand, and gently rub it well over the surface; or, what answers an equally good purpose, let her use the yolk of an egg. Either of these will be very effectual in removing this material. The nurse should then take a soft sponge or flannel, and with soap and tepid water cleanse the child's body thoroughly, but be careful not she does not allow the soap to come in contact with the eyes of the infant, as this is a fruitful source of that annoying and often dangerous affection—purulent ophthalmia. When the child has been washed, it should be carefully dried with a warm and soft linen. The next object of attention is the dressing of the cord, which is done as follows: Take a piece of linen, double it, and cut a hole in the center, through which the cord is to be drawn. The cord is then enveloped in the linen, and turned upward, and to the left, on the abdomen. A circular bandage is applied, which will retain the dressing in place, and also give comfortable support to the infant. But remember that the bandage is not to be drawn tight. Nurses are in the habit of using pins for the purpose of attaching the infant's dress. These oftentimes become loose, and prick the child, and may give rise to serious consequences. I much prefer the needle and thread.

After the circular bandage is applied, the practitioner should examine whether there is any deformity, such as occlusion of the anus or urethra—whether there is any malformation of the mouth which will prevent the child taking the breast, etc. This is the proper time to ascertain the existence of these deformities, in order that prompt measures may be adopted to remedy them, and not delay until the infant's life is placed in peril, and too often without the cause of the danger being at

all suspected. Having ascertained all that is necessary as to the existence or absence of these deformities, the child is then to be dressed, which, under ordinary circumstances, will be done by the nurse without much supervision, except that it is well to caution her against binding the little infant too firmly. This latter practice is a pernicious one, and is by far too common. Well, the dressing is accomplished, and what next? If the nurse should have her own way, she would, probably, as soon as the toilet is completed, take the infant to the window, if in the day time, or, if at night, hold it before a strong light, to show its papa, or some other happy relative, the beautiful and striking features of the "dear babe"—not thinking that this very act is, of all others, best calculated to injure, if not destroy, one of the most important features—the eye. The sudden glare of light on the tender conjunctiva, and on the other membranes of the eye, is a very common cause of the purulent ophthalmia, to which we have already alluded. But whether the infant escape this exposure to the light or not, it will, in ninety-nine instances out of a hundred, be doomed to all the discomforts and dangers of another abominable practice, which, including both nourishment and medicine, may be embraced under the term dosing. This brings us to the consideration of a most important point in connection with the wants of the new-born infant, and so essential is it, that I am clearly of opinion that, of all the causes of deranged health, and early death in infancy, dosing is the most fruitful. As soon as the child is dressed, there is, unfortunately, a routine practice to which it is subjected.

1st. It must take a little oil to purge it; and secondly, the poor "dear, is hungry, and must be fed"—and hence, almost simultaneously with its birth, it becomes the victim either of ignorance or a false philanthropy. I have elsewhere stated to you that the infant, almost as a universal rule, requires no medicine, nor does it need any other nourishment than that elaborated in the breasts of its parent. The mother's milk has been prepared with an exclusive reference to the wants of the child; at first, it contains what is termed the *colostrum*, an element possessing purgative qualities, and which readily and efficiently removes from the intestinal canal the *meconium*, a black viscid material found in greater or less quantity in the intestines of the new-born infant. In addition to the *colostrum*, the composition of the mother's milk is in perfect accordance with the necessities of the infant, and of all substances the best adapted to its assimilative powers. The rule, then, which I desire most earnestly to inculcate upon you is this: Do not defraud the infant of its natural rights; before birth, no one will deny that nature was competent to supply all its wants, as is proved by its perfect physical development. Why should officiousness, as soon as the child is thrown into the world, interfere with those processes which experience shows are, as a general principle, not only necessary but all-sufficient for the healthy growth of the child! Instead, therefore, of

drugging and feeding the infant as soon as it comes into the world, let it be put to the mother's breast after she has recovered somewhat from the fatigues of her labor, say in two or three hours. I have already spoken to you of the necessity and advantage of this practice, both as regards the mother and child, and need not refer to them again. One of the great elements of health in the new-born infant is cleanliness; and the nurse should be instructed to have it well washed every day with tepid water; in the event of acrid evacuations from the bowels it sometimes happens that the child becomes chafed, and if this be not promptly attended to, the surface will become excoriated, giving rise to an unpleasant condition of things, and causing the infant to be fretful. In these cases, the decoction of flax-seed should be freely used in order to bathe the parts every time the child has an evacuation; if this be faithfully done, it will be found, generally speaking, an efficient remedy. I am in the habit of having the infant's mouth washed several times during the day with cold water; it is not only grateful to the child, but it cleanses the mouth, and oftentimes protects it against the various forms of stomatitis, to which your attention has already been directed.

The mother's milk, as we have already remarked, is the most suitable nourishment for the infant; and when there is nothing to forbid her nursing it, such as ill-health, the absence of the milk secretion, etc., she should not only regard the nursing of her child as an imperative duty, and, therefore, derive pleasure from the act, but she should also remember that, without sufficient justification, in depriving that child of the food, which nature has not only prepared for it, but which she has declared more or less essential to its healthy development, the mother is alone responsible for whatever results may ensue from an obstinate and cruel refusal to discharge an obligation, which all right-minded women look upon as sacred. It must, however, be conceded that you will occasionally meet with mothers, whose minds filled with the nonsense of the day, and their hearts steeled against the eloquent appeals of nature, will peremptorily refuse this boon to their child. When you encounter such, it will be your duty to admonish them not only of the wrong they inflict upon the infant, but also of the hazard to which they expose their own health. Thus, upon the principle that selfishness is the great impulse to human action, you may accomplish, by operating upon their fears, what you failed in doing, when you addressed yourselves simply to their hearts.

I have often spoken to you of the sympathy existing between the mammary glands and uterus, and I will, on this occasion, mention one circumstance in this connection to show you the peril to which women subject themselves who do not nurse their children. These latter are extremely liable to congestion of the uterus, for the reason that lactation, under its full operation, is one of the most effectual modes of preventing this congestion by its derivative influence upon the breast.

I need not tell you, for we have often spoken of it, that congestion of the uterus is a most insidious condition; it rarely fails, especially when not attacked in its very inception, to lead to serious disturbing influences—and it sometimes is the commencement of a disease the most loathsome, and unhappily the most rebellious entailed upon woman—cancer.

There are, however, other perils to which the female who refuses to nurse her child is exposed. You will observe that almost as a universal rule, the urine of pregnant women will differ from urine under other circumstances in one remarkable particular, viz.: It contains an element called Kiestine, which in its essential qualities resembles casein. Why should this element, Kiestine, be found in the urine of the pregnant and parturient female? It is absurd to suppose that it is there as a mere coincidence, and we, therefore, are justified in asking some explanation for its presence. Is the Kiestine in the urine any thing less than a demonstration that the system is engaged in the preparation of food necessary for the infant as soon as it is born—and is the passage of this substance from the system through the kidneys any less of a demonstration, that its accumulation in the blood would be productive of injurious consequences? The kidneys, we know, are among the most important emunctories of the economy; while the liver extricates bile, the lungs carbonic acid, the skin the poison of perspiration, etc., the kidneys perform their office in furnishing an outlet for deleterious substances, such as urea, and, I believe, Kiestine, etc. Let us now, for a moment, consider another fact in this connection. When the child takes the breast, and the secretion and excretion of milk through the mammary organs are in complete operation, there is no longer any Kiestine to be detected in the urine. This, I think, is strong evidence that its sojourn in the blood, without any outlet, is not in accordance with the ordinances of nature, and therefore, until free lactation commences, a temporary exit is furnished for this material by the kidneys.

Again, women who do not nurse their children, are often affected by serious nervous disturbances—some have delirium, others I have known to be convulsed, and again puerperal mania will ensue. Why is this? I think these morbid phenomena may be explained in this way—the Kiestine, through its accumulation, acts as an irritant upon the nervous centers, just as bile in the blood will produce coma, or urea, uræmic intoxication. You hear much of the third-day fever, or, as it is termed, the milk-fever, among women recently delivered—is this commotion in the system not readily explained by the fact that after delivery, before the breasts are in full duty, the nervous system becomes the seat of irritation from the increase of Kiestine? It would seem so for the reason that as soon as the milk begins to flow freely, tranquillity again prevails throughout the economy. It will yet be found, I am confident, that during pregnancy Kiestine is not the only element in the urine proper to

milk. It has already been ascertained in the case of a female who did not nurse her child, that the urine contained butyric acid. If, then, the kidneys act as a temporary outlet for the various elements composing the milk, only until after the birth of the child, when, according to nature's requirements, this outlet is no longer necessary, because of the escape of these materials through the breasts, can we regard the inaction of the mammæ in any other light than as a circumstance necessarily calculated to produce morbid phenomena? Again, much has been said recently, touching the connection between albuminuria and puerperal convulsions, and some writers have attempted to show that eclampsia is exclusively the result of the presence of albumen in the urinary secretion. How stand the facts?—for after all, the stability of human opinion, whether upon science, commerce, or any other subject, will depend upon facts. It has been demonstrated that albuminuria is of frequent occurrence in pregnant women; it has also been demonstrated that puerperal convulsions are comparatively of rare occurrence.

Among forty-one pregnant females observed by Blot, in the *Maternité* at Paris, in all of whom albuminous urine was detected, only seven were attacked with convulsions. This certainly does not look like cause and effect. Again, may not this alleged frequent presence of albumen proper in the urine be simply the result of that process to which the presence of Kiestine is due, or may not its supposed frequency be the result of inaccurate tests? It would seem so, for the reason that casein, which so closely resembles Kiestine, is, in all its essential properties, albumen. If there be any truth in this assumption, an interesting question arises—May not puerperal convulsions be due, not to albuminuria, but to an excessive accumulation of Kiestine in the blood? And in connection with this interrogatory, it strikes me as of great importance to ascertain first the relative frequency of eclampsia *after* delivery in women who do and do not nurse their children, and secondly, the relative proportion of Kiestine in the urine of those who escape, and of those who are attacked with convulsions.

In a physiological sense, the nursing of the infant by its parent is an act full of interest, and if any one circumstance more than another, in the general provisions of the human mechanism, reveals both the wisdom and benevolence of Divine power, it seems to me that circumstance is found in the peculiar elements composing the mother's milk, as connected with the necessities of the child. Let us, for a moment examine this subject. It is ascertained, through the investigations of the chemist, that the milk of the mother contains every element necessary for the nourishment and growth of the infant, and this milk is composed of water and solid substances. The latter consist of caseum, butter, saccharine matter, and certain incombustible salts. Each one of these substances has its own office assigned it, or, in other words, answers a special purpose in the important act of nutrition. Food, you are aware, is intended,

when taken into the system, to accomplish two purposes: 1st. The development of the various tissues of the body; 2d. The production of animal heat, which is effected through the respiratory process, and thus dependent upon a proper supply of what is called respiratory food. The first of these objects, the development of the tissues, is attained through the caseum; while the second, the maintenance of animal heat, is achieved through the butter and saccharine matter, which is the true respiratory food.

But something more is needed than the mere increase of tissue and the production of animal heat in the young infant. In addition to these, it requires consolidation—the bony system, which constitutes the basis of the mechanism, must be strengthened and made adequate to the duties imposed upon it. This process of consolidation is accomplished by another element in the mother's milk—the phosphate of lime. How simple and yet how perfect this provision of nature for the wants of the young child! In the first place, she points to milk as the best adapted, because of its blandness, to the feeble assimilative powers of the infant, and yet in that bland fluid are contained the various elements for perfect nutrition. Guérin has shown that rachitis is frequently produced in young infants in two ways: 1st. By not being nursed, but fed upon improper food; and, secondly, by being nursed for too long a period, and confined exclusively to breast-milk. He has succeeded in producing rachitis in young animals, either by interrupting their regular course of nursing, or by confining them too long to the exclusive use of the mother's milk. The explanation of the fact is as follows: Milk contains a certain proportion of the phosphate of lime, especially intended for the formation of bone in the young infant; while, on the contrary, oftentimes the food given to the child immediately after birth, as a substitute for the mother's milk, contains comparatively but a small quantity of the salt. In these latter cases, the infant is not provided in sufficient abundance with the material necessary for the consolidation of its osseous system, and hence the development of rachitis. At a later period the child requires more of the phosphate of lime than is contained in the milk, and if another diet be not substituted the same consequences ensue. In addition to these views of Guérin, it must be recollected that rachitis, and more especially local or limited rachitis, as it has been termed, may exist without reference to the elements contained in the food. In an interesting paper recently published by Vischow, it has been shown, after repeated microscopical examinations, that the arrest of the normal growth of the osseous system, in part or altogether, may result from two conditions: 1st. Insufficiency of earthy salts in the nutriment; 2d. From some impediment to the deposit, within the osseous structure, of these earthy salts—the impediment being occasioned by some peculiarity either of the blood or of the ossifying parts, or by something abnormal in the circulation and nutrition of the bone itself.

I might here allude to some extremely important facts lately brought to the attention of the profession by Dr. Mouriès, and which have received the sanction of the French Academy of Medicine. He seems to have proved, 1st. That the diseases and mortality of infancy are in great part due to the insufficiency of the phosphate of lime in the ordinary nourishment; 2d. That by mixing a certain amount of this salt with the daily food of nurses, pregnant women, and children, both the number of deaths and of diseases is greatly diminished. In confirmation of his views, he presents the following satisfactory and striking results: Of seventy children under one year of age, to which he administered the phosphate of lime, the deaths were one in six; while, according to the official statistics, the deaths, under ordinary circumstances, in the city of Paris, within the first twelve months of existence, are one in four. The views of Dr. Mouriès have been also very satisfactorily confirmed by Dr. Pégot-Ogier, who gives the following as the results of his experience: He selected eighteen women who, in the aggregate, had borne twenty-two children, eight of which had died in the first year, the fourteen others were weak and lymphatic. Under these unfavorable circumstances, the influence of proper nourishment was fully tested. To some, Dr. Pégot-Ogier gave food with the phosphate of lime during their pregnancy, and to others during the period of lactation. During this change of diet, they had eighteen children, only three of which died during the first year, from accidental causes; while the remaining fifteen were remarkable for good health. So that the same women who, with their ordinary nourishment, had lost eight children out of twenty-two, lost only three out of eighteen when their diet was changed by the addition of phosphate of lime during pregnancy or lactation; and, again, the former children were lymphatic and delicate, while the latter exhibited all the appearances of robust health. In addition to the above interesting facts, Dr. Mouriès has shown that in rachitic children the use of the phosphate of lime with the food not only improves nutrition, but will arrest the progress of the disease. Dr. Beneke has also developed, at some length, the efficacy of the phosphate of lime not only in rachitis, but likewise in scrofula and other wasting diseases; and he makes this significant remark in reference to these special effects of the phosphate of lime, viz.: It should be kept in mind that the phosphate always increases the formation of cells, and prevents the rapid and fearful waste of tissues.

NEURALGIA OF THE CERVIX UTERI IN A MARRIED WOMAN, AGED TWENTY-THREE YEARS, NO CHILDREN.—Mrs. S., married, aged twenty-three years, complains of intense pain in the womb, from which she says she has suffered more or less for the last four months. "What was the state of your health, my good woman, previous to the last four months?" "It was good, sir." "Were your turns regular?" "Always, sir." "How have they been since you have complained of this pain?" "They have

been regular, sir; but I have suffered at the time more than I ever did in my life." "Are you troubled with a discharge?" "Yes, sir; there is something that passes from me like water." "How long have you had this discharge of water?" "Only, sir, since I have had the pain in my womb." "Is the pain constant?" "No, sir; it comes and goes."

This case, gentlemen, is one which, perhaps, would cause you some embarrassment in your diagnosis; but with due attention you will be enabled to ascertain the nature of the trouble with which this woman is affected. It can only, however, be done by a vaginal examination. I have satisfied myself, by this mode of exploration, that the case before us is what is termed neuralgia of the neck of the womb, an affection which you will occasionally meet with, and which oftentimes is mistaken for some other disorder; and there is no disease with which it is more likely to be confounded than chronic congestion of the uterus. Uterine neuralgia is sometimes symptomatic of disease of the uterus, such as engorgement, ulceration, etc.; sometimes, also, of displacement. Again, it will occasionally present itself as a primary affection entirely unconnected with any lesion of structure. This is the case in the instance before us.

On an examination, *per vaginam*, I have recognized no change whatever in the position or structure of the uterus—the organ is in all respects natural, except in one particular—in pressing with my finger on the os uteri the patient complains of extreme suffering. This is one of the material diagnostic symptoms of this affection; and, taken in connection with two other circumstances—the intermittent character of the pain and the discharge of water—there can be no doubt as to the nature of the malady. In enumerating the causes of watery discharge *per vaginam*, I have told you that simple irritation of the mucous membrane will sometimes produce it—and you have an example of this influence in the case of the woman now before us. As to the intermittent character of the pain, you know very well that this is one of the usual, though not constant accompaniments of neuralgic affections. Neuralgia of the uterus is not only a most distressing malady, but it is also frequently protracted and rebellious to remedies, simply because it is confounded with other affections. It is not always confined to the neck of the organ—on the contrary, it will sometimes be seated in the annexæ of the uterus, and at other times in the fundus and body. As a very general rule, patients laboring under this affection will suffer more or less from painful menstruation. Valleix considers uterine neuralgia as a form of the lumbo-abdominal neuralgia to which your attention has been directed on a former occasion; and, according to his experience, there will be pain in the hypogastrium, and more or less uneasiness along the course of the first pair of lumbar nerves. In all cases of uterine neuralgia, which have fallen under my observation, I have invariably examined

the lumbar region, and, as a general rule, have detected sensibility on pressure.

Causes.—This affection will be produced by engorgement, ulceration, and displacements of the uterus; and in such cases the neuralgia is, of course, symptomatic. When, however, it presents itself as an idiopathic or primary affection, the causes are oftentimes obscure. However, cold, a suppressed menstrual or leucorrhœal discharge, mental emotions, etc., may be noted among the causes capable of giving rise to it.

Symptoms.—Pain is the prominent characteristic symptom of this affection; the pain is experienced in the loins, through the pelvis, in the lower portion of the abdomen, and uterus; and sometimes extending to the thighs. It is usually intermittent, and again it is continuous, and marked by exacerbations, during which it will occasionally become so intense as to produce various disturbances of the nervous system, such as hysteria, convulsions, and even mania. I once saw a case of uterine neuralgia in which, during the maximum of suffering, the pain seemed to locate itself with a concentrated force in the urethra, occasioning a desire to pass water, but resulting in an inability to do so in consequence of the strong contractions of the sphincter of the bladder; and it is an interesting fact for you to remember that the introduction of the catheter was not only followed by a free evacuation of urine, but a complete cessation of suffering. Sexual intercourse, or the slightest touch in an examination *per vaginam*, will aggravate the pain in uterine neuralgia; and one of the first indications of this affection will frequently be distress during intercourse.

Diagnosis.—If a patient complain of pain in the uterus, and the pain be the result of idiopathic neuralgia, there will be no change in the structure of the organ, but there will be very acute sensibility on pressure. Therefore, in these cases, you can affirm with positive certainty that the pain is altogether neuralgic. Again, these pains are not unfrequently the consequences of disease of the uterus, such as engorgement, ulceration, etc. In these latter instances, the recognition of the particular affection of the uterus will of course enable you to establish in your own minds whether the neuralgia is primary or secondary, an important distinction so far as the treatment is involved.

Treatment.—It can scarcely be necessary to remark that the treatment of secondary uterine neuralgia consists in the removal of the disease which produces it, whether it be ulceration, engorgement, displacement, etc. Not so, however, with idiopathic, or primary neuralgia. In these cases, you can have recourse to various remedies, and generally with complete success. Two or three cauterizations of the neck of the womb with the nitrate of silver, or, as Jobert prefers, the red-hot iron, will, in the majority of cases, suffice to effect a cure. An issue or repeated blisters on the sides of the lumbar vertebræ, or in the hypogastric region, are also valuable remedies. When the pain is marked by distinct inter-

vals, I have known it to yield most promptly to quinine, as recurrent neuralgia oftentimes yields to this agent when seated in other portions of the system. Malgaigne speaks of repeated success from the introduction of a small sound into the uterine cavity, on the principle that it modifies the nervous sensibility of the mucous membrane. For the purpose of giving temporary relief during the paroxysm of pain, belladonna ointment, laudanum injections, etc., may be resorted to.

RETRO-UTERINE HÆMATOCELE IN A MARRIED WOMAN, AGED THIRTY-FOUR YEARS, THE MOTHER OF FOUR CHILDREN, THE YOUNGEST FOURTEEN MONTHS OLD—EXPLORING NEEDLE.—Mrs. L., married, aged thirty-four years, the mother of four children, suffers from very severe pain in her back passage, and says she has a frequent desire to have an evacuation from her bowels, but passes very little. "How long, madam, have you suffered from this pressure on your back passage?" "For the last two months, sir." "How was your health previous to that time?" "It was always good, sir." "Did any thing occur two months ago to which you can in any way refer this pressure of which you speak?" "Nothing, sir, except a fall I had." "How did you fall, my good woman?" "I was coming down stairs, sir, with a tub of water, my foot slipped, and I fell down a whole flight of steps." "Were you much injured at the time?" "No, sir; but I was terribly jolted." "How soon after the fall did you begin to feel this pressure?" "The next day, sir." "Were your bowels regular previous to the fall?" "Yes, sir." This case, gentlemen, is one about which it is impossible even to approximate an opinion without a minute vaginal examination. Pressure on the rectum may be the result of various conditions, such as retro-version of the uterus, prolapsion of the ovary or small intestine into the triangular fossa, a collection of hardened feces, internal hemorrhoidal, and other tumors. [The patient was placed on the bed, and the Professor proceeded to institute the necessary examination.] From the examination I have just made, it is obvious that the pressure on the rectum, and difficulty in defecation, are owing to a tumor in the fossa, between the intestine and uterus.

The next question to be decided is, as to the particular nature of this tumor. That it is not the retro-verted uterus, I am assured from the fact that the cervix of the organ is rather inclined backward while the fundus is thrown somewhat forward by the pressure of the tumor; and I am equally confident it is not a prolapsed ovary from the two following circumstances: 1st. There is no indication of any disease of either of the ovaries; and, secondly, if the tumor were occasioned by the descent of a healthy ovary, which sometimes happens, it would be characterized by great mobility, which is not the fact in the case before us. The pressure is not occasioned by a collection of fecal matter, as I have ascertained by the introduction of the finger into the rectum. What, then, is this tumor? In my opinion, we have in the person of this patient an ex-

ample of a most interesting form of tumor—I believe it to be a collection of blood, or what may be termed an hæmatocele; and from the position it occupies, is entitled to the name of retro-uterine hæmatocele.

The reasons for my opinion are these: 1st. The fall would be likely to produce an extravasation of blood; 2d. To the touch, the tumor is soft, elastic, immovable, and evidently contains fluid. If I am correct in this view, a most interesting question arises, What is to be done? Nelaton, in cases like these, recommends the use of the exploring needle in preference to incision, for the reason that there is more or less danger from hemorrhage if incision be had recourse to; and, moreover, he finds that the tumor often becomes absorbed; while, in other instances, the blood escapes through the rectum or the genito-urinary organs. "Now, my good woman, if you will permit me, I will ascertain the true cause of your suffering, and will do all in my power to relieve you." "You may do any thing you think best, sir." "That's a sensible woman, as full of courage as you are of common sense." [The Professor here introduced the index finger of the left hand into the vagina, and passed along the finger a small exploring needle, with which he penetrated the tumor, between the rectum and uterus, directing the needle upward. It was evident that the diagnosis was a correct one, for, as the tumor was penetrated, blood escaped.] You see, gentlemen, in the blood which passed from the sac as soon as it was entered, the best evidence of the accuracy of the opinion we had formed touching the nature of the tumor. I do not feel disposed, under the circumstances, to do more than introduce occasionally the needle for the purpose of allowing a small quantity of the blood to escape, for I have very little doubt that this, together with the action of the absorbents, will suffice to disperse the extravasated fluid. It will be proper, however, to keep the bowels in a soluble state, and, in order to accomplish this, I shall direct a pint of tepid water to be thrown up the rectum every night.

CONVULSIONS AND EXCESSIVE PURGING IN AN INFANT ONE MONTH OLD, PRODUCED BY THE MOTHER'S MILK—CATHARTIC PROPERTIES OF THE COLOSTRUM.* Mrs. C., aged twenty-six years, married, returned to-day to the Clinique, and expressed many thanks for the restoration of her little child. "Is that infant, my good woman, the poor little attenuated object you brought here two months ago?" "Indeed it is, sir; and I thought you would be very glad to see how much he has improved?" "Well, I suppose I must believe you, but I certainly should never have recognized it." No case, gentlemen, amid the thousands we have had, has as yet presented itself at this Clinique, which embodies more interest and strictly practical illustration than the child you now see before you. You will recollect that it was affected with excessive purging, and was attacked with convulsions. Its only nourishment was its mother's milk; and you will not have forgotten that, after a full examination of all the

circumstances, I attributed the purging and convulsions to the irritation of this milk, in which, through means of the microscope, I recognized the presence of the colostrum, which you know is characterized by numerous yellow granulated corpuscles. The colostrum exists in the milk with the birth of the child. It contains cathartic properties, and purges off the meconium, which is in greater or less quantity in the intestines of the new-born infant. It usually leaves the milk a few days after birth; but should it continue beyond a certain time, it becomes an irritant, and in this way may produce excessive purging and convulsions. If you will turn to your note-books, you will probably read with profit what was said when the child was first brought here. Under the head of *treatment* you will find that I prescribed no medicine whatever, but used the following language: "This infant must have another nurse immediately—if one can not be procured, it must be weaned. A fresh and healthy breast of milk will do more for it than all the compounds of the *Materia Medica*. Madam, if you continue to nurse your child, it will die; but if you will prove yourself a sensible woman and follow our advice, we will do what we can to restore it to health." I quote this language to show you that there was no doubt in my mind, in the first place, as to the cause of the purging and convulsions, and secondly as to the course to be pursued. "Did you wean your child, my good woman?" "No, sir; but I stopped nursing it, as you directed, and got a friend, who had lost her infant, only six weeks old, to nurse mine." "Does she still continue to nurse it?" "Oh! dear, yes, sir, and you see how it thrives!" "That's right, my good woman—keep your wet-nurse, and have nothing to do with physic, and your child will do well."

SUPPRESSION OF THE MENSES IN A MARRIED WOMAN, AGED THIRTY-ONE YEARS, OF NINE YEARS' DURATION, WITH CHRONIC INFLAMMATION OF THE UTERUS—THE EMMENAGOGUE PROPERTIES OF MERCURY* Mrs. M., married, aged thirty-one years, no children, who, it will be remembered, had labored under chronic suppression of the menses for a period of nine years, returned to-day, and reports that she had a slight return of her courses a week since. This patient, when she first came here, I examined with much care, and ascertained that, in addition to the suppression, she was afflicted with chronic inflammation of the uterus—the tissues of the uterus were thickened, and the organ consequently enlarged. I called your attention, in cases of chronic inflammation such as this, to the excellence of mercury as a remedy. I spoke to you of its deobstruent properties, and stated that it had often served me when all else had failed, in restoring the menstrual function after a protracted suppression, especially when connected with chronic inflammation of the uterus. The following treatment, you will remember, was ordered:

R	Submur. Hydrarg.	. . . . .	gr. xxiv
	Pulv. Opii	. . . . .	gr. iv

Ft. Massa in pil. xij div.

* Page 403.

One pill to be taken night and morning until ptyalism is produced—and in order that the action of the mercury may be continued for some time, one pill should afterward be given at intervals of four or five days, as circumstances may indicate. “Did you take the medicine as directed, my good woman?” “Yes, sir.” “Did your mouth become sore?” “Yes, sir; it became sore after I took six of the pills.” “Is it sore now?” “No, sir; but it continued tender for nearly two months.” “Do you feel better in your general health?” “Very much better, sir.” I have no doubt, gentlemen, we shall succeed in the complete restoration of the menstrual function in this case, and I shall attribute it entirely to the action of the mercury. “Now, my good woman, you need take no more pills, but I would advise you to drink in divided doses during the day half a pint of the compound decoction of sarsaparilla.

AMENORRHŒA IN A GIRL SIXTEEN YEARS OF AGE, FROM AN ATONIC CONDITION OF SYSTEM.—DANGER OF THE INDISCRIMINATE USE OF EMMENAGOGUES.—Mary W., aged sixteen years, is brought by her mother to the Clinique; she complains of general lassitude, a disinclination to take exercise, and says she has no appetite; for the last six months, she has been much troubled with headache, is restless at night, and extremely nervous—the pulse is feeble, and the tongue coated. “Your daughter has always been rather delicate, has she not?” “Yes, sir.” “Has she ever had her turns?” “About four months ago, sir, she had a very slight show, but nothing since; every month, she suffers a great deal of pain in her back and hips, and I think, sir, if you could give her something to bring on her courses, she would get well.” “We will see about that, my good woman. How are her bowels?” “Always confined, sir.” Here, gentlemen, is a young girl, sixteen years of age, laboring under one of the forms of amenorrhœa, viz.: Retention of the menses. You are aware that retention may be caused by numerous conditions of system; in one case, mechanical obstruction, such as imperforate os tinæ, imperforate hymen, occlusion of the vagina; in another, plethora; in another, a leucorrhœal discharge, which may for some time become the substitute of the menses; while again, the retention may be due to a general or local atonic condition; in the former case, the general system is at fault; in the latter, the lethargy is confined to the uterine organs.

Amenorrhœa, either in the form of suppression or retention, is a very common affection, and it is of the greatest importance that you should clearly understand, when called upon to treat it, to what condition of system either the one or the other is due. It can scarcely be necessary for me to dwell at length on the case before us; you have only to look at the pallid cheek of this girl, examine her debilitated pulse, and observe her coated tongue, to be convinced that the entire machinery of the system

Let this powder be taken in half a tea-cup of warm water; and after she commences vomiting, the girl should drink plentifully of water, so as to facilitate a free emetic action, and also break the violence of the effort. The night following the emetic, she should take:

℞ Hydrarg. c. cretâ gr. xij

and the next morning ℥j of castor oil. This will probably produce an active cathartic effect, which this patient is much in need of, and which will unload the *primæ viæ* by bringing away quantities of hardened fæces and vitiated matter. With a view afterward of keeping the bowels in a soluble state, and at the same time invigorating the general system, I shall order the following ferruginous aperient, a table-spoonful of which may be taken twice a day:

℞ Sulphat. Ferri	gr. vj
Sulphat. Magnesiae	3 ij
Acid Sulph. Dilut.	3 ss
Infus. Gentianæ {	℥ iij
Infus. Rosar. c. }	

Fl. Mist.

The diet should be simple, but nourishing; after the system has become relieved by this treatment, and the health measurably restored, it may be proper to place this girl under the influence of iron and aloes, or even the electric current applied from the back to the uterus, all of which remedies are calculated to do good in this form of amenorrhœa, *after the general health has been improved.*

RETRO-VERSION OF THE UTERUS IN A MARRIED WOMAN, AGED THIRTY-FOUR YEARS, THE MOTHER OF FOUR CHILDREN, THE YOUNGEST TWO YEARS OLD.—DYSMENORRHŒA—ITS CONNECTION WITH UTERINE DISPLACEMENTS.—Mrs. P., married, aged thirty-four years, the mother of four children, the youngest two years old, complains of more or less constant pressure on her back passage, and says she has great difficulty in evacuating her bowels and bladder. “How long, madam, have you suffered from this pressure on your back passage?” “Nearly a year, sir.” “Are you much confined in your bowels?” “Very much so, sir, and I always suffer a great deal of pain when I have them opened.” “You say you can not pass your water freely?” “No, sir; I am often very much troubled in that way.” “Have you sick stomach?” “Yes, sir.” “Have you a feeling of numbness in your lower limbs?” “Yes, sir; I feel sometimes as if I could hardly drag them along.” “How are your courses?” “They are regular, sir, but I suffer a great deal of pain when I have them.” “Have you always had pain at that time?” “No, sir; only since I have had this pressure on my back passage.” The real nature of the case before you, gentlemen, it would be difficult to appreciate without further evidence on the subject; and this evidence can be furnished only by a vaginal examination. This examination I have made, and the difficulty under which the patient labors is fully revealed. The

pressure on the back passage is occasioned by the falling backward of the fundus uteri upon the rectum, constituting what is known as retro-version of the organ. The uterus, you are aware, is divided into its cervix, body and fundus. The cervix, beside ante-version and retro-version, is liable to two other forms of displacement, viz., ante-flexion, and retro-flexion, in either of which cases the cervix is bent as it were on the body like the beak of a retort.

These flexions of the uterus have sometimes been mistaken for other diseases, and more especially for tumors. This latter error it is most important for you to guard against, for there is more than one case on record in which the knife has been employed for the removal of the supposed tumor, when in fact the heedless surgeon has, through an unpardonable error in diagnosis, excised the cervix uteri. The fundus of the uterus may be displaced by falling forward or backward. In the former case, there will be ante-version, in the latter retro-version. Retro-version is the more common, and is also attended with more serious consequences, for the reason that constipation and retention of urine are generally the uniform and distressing symptoms, under an aggravated state, of this character of displacement. The uterus is situated between the bladder in front, and the rectum posteriorly; the packet of small intestines being above, regarding the upper surface of the fundus, while the inferior portion of the organ, the os, is encircled by the upper extremity of the vagina. The uterus, with these relations, is far from being an immovable organ; on the contrary, mobility may be said to be one of its characteristics, not only in the unimpregnated state, but also in the earlier stages of pregnancy; so that, under the operation of certain influences, the various displacements to which it is liable may occur both in the impregnated and unimpregnated condition. Retro-version, although sometimes met with in the absence of gestation, is most likely to be observed during the three or four first months of pregnancy; and there is a remarkable instance recorded by Hunter in which, from the impossibility of reducing the retro-version in a case of gestation, the woman died, and on an examination after death, the long axis of the uterus was found completely wedged in the antero-posterior diameter of the pelvis.

Causes.—Among the causes of retro-version may be mentioned a deformed pelvis with an increased capacity, undue pressure of the viscera, particularly the distended bladder, falls, blows, etc.; and I can well imagine how that ridiculous contrivance of fashion—the destructive corset—by its pressure from before backward, below the umbilicus, may act as a cause of this displacement.

Symptoms.—There is a wide difference in the severity of the symptoms accompanying retro-version of the uterus; and this difference will depend upon one material circumstance, viz., whether the displacement be partial or complete. In the latter case, all the distressing sensations will be much aggravated, such as pressure on the rectum, tenesmus, urgent but

ineffectual efforts at defecation, a sense of dragging in the groins and lumbar region, nausea, difficulty, and sometimes inability to pass water. You will recollect the connection between the bladder and uterus to be as follows: The inferior third of the anterior surface of the uterus, the only portion of this surface which is not covered by peritoneum, is in contact, through the medium of cellular tissue, with the *bas-fond* of the bladder.

With these relations between the two viscera, you can at once understand how, in the event of retro-version, the bladder, more or less distended with urine, will necessarily tend to increase the displacement. For example, in this case the bladder can not ascend into the abdominal cavity without drawing the cervix of the uterus upward, and at the same time making increased pressure on the retro-verted uterus, so that the bladder itself loses, in a certain degree, its vertical position, and hence the fact that retention of urine is an important symptom of retro-version. From the pressure excited on the rectum by the fundus of the womb, there is very apt to be an accumulation of *fecal* matter above, and this not only aggravates, but tends, by the superincumbent pressure of the *feces*, to depress the fundus still lower—thus adding not only to the suffering of the patient, but, at the same time to the difficulty of successful treatment. Nausea and vomiting are common accompaniments of retro-version; and it should be particularly borne in mind that not only in retro-version, but also in ante-version, as well as in retro-flexion and ante-flexion of the uterus, dysmenorrhœa is oftentimes a prominent symptom. Nothing can be more important than the recollection of this fact, for it is evident that, when dysmenorrhœa is traceable to uterine displacement, without a knowledge of the circumstance, all medication will be useless, if not injurious; and yet how many women linger on for years with increased suffering from this form of menstrual aberration—the cause of the dysmenorrhœa never having been suspected by the practitioner. It is needless to state that in such case the remedy for the dysmenorrhœa is the removal of the displacement. Hysteria, with its multiplied and varying phenomena, may also be classed among the occasional accompaniments of mal-position of the uterus; and, lastly, partial or complete paralysis of the lower limbs may be the consequence not only of retro-version and the other forms of displacement of the organ, but also of its derangements from chronic inflammation, polypus, carcinoma, etc.

Diagnosis.—Is it possible to mistake a retro-version of the uterus for something else? I answer—Without due caution, the practitioner may fall into the error. It may, for example, be confounded with a collection of *fecal* matter in the rectum, with a prolapsion of the ovary into the triangular fossa between the uterus and rectum, or it may be mistaken for an enlargement of the posterior surface of the fundus, or body of the uterus. In retro-version, when the finger is introduced into the vagina, the cervix will be found forward, while the body and fundus

will be pressing more or less backward on the intestine, and these displacements will be greater or otherwise depending upon whether the retro-version is complete or partial. A collection of fecal matter, simulating the retro-verted uterus, will soon be made to disappear by a brisk purgative, or an enema. In prolapsion of the ovary, the prominent symptom is pressure on the rectum, with a tendency to ante-version of the fundus. The most certain mode of discriminating between retro-version of the uterus and prolapsion of the ovary, is the introduction of the uterine sound, which you have seen me employ several times in the Clinique. When the sound has penetrated the cavity of the womb, in case of retro-version, the organ will be made to assume its normal position, and consequently no tumor will be found pressing on the rectum. In prolapsed ovary, on the contrary, the introduction of the sound will not remove the tumor, and it will be felt as distinctly as before the sound was introduced. In simple enlargement of the posterior surface of the fundus, or body of the womb, there will be little or no displacement of the cervix.

Prognosis.—In complete retro-version, great difficulty may be encountered in overcoming the displacement, and, under some circumstances, the reduction may prove altogether impossible, so that the prognosis will not always be of the most favorable kind.

Treatment.—This consists in attempts, through manipulation, to restore the uterus to its original position. The patient should be placed on her back or side—the rectum and bladder having been previously emptied. The practitioner then introduces his index and middle fingers into the vagina, carrying them backward, and when they reach the retro-verted organ, an effort is made to push it upward, while, at the same time, with the index finger of the other hand, he endeavors to depress the cervix. This plan, however, though it may appear feasible, often fails, and indeed I am of opinion, contrary to some authors, that the successful treatment of a retro-verted uterus is among the most difficult duties of the medical man.

There are two other modes which have been proposed, and they have been followed by tolerable success. One consists in the introduction of the intra-uterine pessary of Simpson and Valleix, the other of the rectal tampon. Recently the intra-uterine pessary has called forth much discussion, and the profession appear to be divided in opinion as to its utility.* I have no doubt that, under some circumstances, this instrument

* The subject of uterine displacements, in connection with the intra-uterine pessary, has of late occupied much of the attention of the French Academy of Medicine. It may, indeed be said that the examination of this question brought out the full strength of the Academy, for among those who took part in the discussion, are the names of Velpeau, Huguier, Malgaigne, Amussat, Piorry, Dubois, Hervez de Chegoïn, Robert, Cazeau, Depaul, etc., a constellation certainly of bright and high names in France. The committee originally appointed by the Academy to report on the subject of the intra-uterine pessary, as a remedy for the various

is one of valve, but it has at the same time been sadly abused. The rectal tampon has proved efficient with Huguier and others, and consists of a rod eight or ten inches in length, with a tampon made of old linen at the extremity. This, being smeared with oil, is introduced into the rectum,

displacements of the uterus, consisted of MM. Robert, Huguier, and Depaul, the latter of whom acted as chairman, and delivered the report, which led to a protracted and interesting discussion. Depaul and Valleix may be said to be respectively the representatives of two opposite schools on this subject; the former repudiates the idea that uterine displacements produce, of themselves, any pathological conditions of the organ, and maintains that, in most of the alleged cases of disturbed action, the disturbance is due not to the displacement, but to some complication, such as ulceration, engorgement, granulation, etc., of the uterus. He also affirms that science possesses for these displacements a treatment far more rational and efficient than intra-uterine pessaries, and he states that the facts cited as proof of the successful treatment by these instruments tend only to demonstrate their utter inefficiency; and lastly, he avows that the employment of the intra-uterine instrument has been followed by the most serious results, and even by death itself. On the other hand, Valleix is the uncompromising advocate for the use of the intra-uterine pessary, and maintains with vigor its undoubted efficacy.

It seems to me that the discussion which this question has provoked is somewhat tinctured with pride of opinion—there appears to have been an obstinate determination, on the part of the respective disputants, to make a struggle for victory, and, in accordance with this resolution, most else was forgotten in the debate, save that which would tend to the accomplishment of this one object. This, perhaps, may be regarded as extremely free criticism, but I am strongly impressed with the conviction that I am right. Let us now briefly examine the material points of the controversy. One of the prominent positions assumed by Depaul in his report is, that “the influence of uterine displacements has been greatly exaggerated, and that the symptoms attributed to these deviations belong to some other pathological conditions.” Is this a truth recognized in practice, or is it simply an assertion for the forum? If the former, then it is of value, if the latter, it is entitled to no consideration whatever, so far as the elucidation of the question under debate is concerned. I am, indeed, much surprised at the sweeping declaration, for it is against all experience. Will the learned reporter undertake to assume that pure displacements of the uterus, unaccompanied by complications of any kind, are incapable of giving rise to morbid phenomena? If I understand his language, such is its import. Now, what are the facts which daily experience reveals to us? They are as follow: In deviations of the uterus, such as ante-version, retro-version, prolapsion, etc., the usual morbid phenomena resulting from the displacement will be, irritation of the bladder and rectum, sometimes amounting to great distress, deranged menstruation, constitutional disturbance of various kinds—in one female, for example, there will be hysteria, in another, paraplegia, etc. There is no speculation in these statements, they are the broad results of daily observation, and therefore must be accepted as the revelations of the sick room, where, after all, the true merits of this controversy must be weighed and decided. I do not pretend to deny that, under certain circumstances, a female may have displacement of the uterus, without suffering much, if any, inconvenience. But this is the exception, while the reverse constitutes the general rule.

Again, how frequently is the fact illustrated in practice, that the serious

the object being to press the retro-verted fundus upward, and restore it to its natural position. Amussat, fully appreciating the difficulty of retaining the uterus *in situ* after the displacement has been reduced, and having tested the failure of the various contrivances proposed for this

troubles consequent upon uterine deviations subside almost simultaneously with the restoration of the organ to its proper position. Depaul, besides denying the connection between displacement of the uterus and any morbid phenomena which may ensue, not only refers these phenomena to complications, such as ulceration, granulations, etc., but maintains, in the most unqualified manner, that it is only necessary to cure the granulations, or ulceration, in order to accomplish the return of the uterus to its natural situation. This assertion is certainly not warranted by the experience derived from the field of practice, and is full of mischievous consequences both to the patient and practitioner. We know very well that prolapsion of the uterus is often the result of engorgement, or hypertrophy of the cervix, and in such case, the remedy for the prolapsion is the removal of the engorged or hypertrophied condition. But this is very different from the broad statement that ulceration or granulation of the uterus stands so intimately in the relation of cause and effect with displacements of the organ, that to remedy the latter, it is only necessary to remove the former. Moreover, I think it can be shown that ulceration, etc., of the organ, instead of being causes of uterine deviations, are often the result of these deviations. For example, in ante-version or retro-version, and even in prolapsion, the cervix becomes, from more or less contact with the bladder, rectum, or the folds of the vagina, the seat of irritation, and this irritation not unfrequently terminates in the development of disease, which may assume the form of simple erosion, granulation, or ulceration.

If, now, we look at the other side of the question, it will, I think, be quite evident that Valleix, in his strong advocacy of the intra-uterine pessary, as the great and almost universal remedy for displacements of the womb, inculcates a doctrine not only at variance with facts as observed at the bed-side, but which, if carried out to the extent he claims, must of necessity result in injury more or less serious to the patient. In the first place, the introduction either of the sound or pessary into the cavity of the uterus requires, on the part of the practitioner, a certain degree of skill, and a thorough knowledge not only of the normal position and connections of the displaced organ, but also of the modifications to which the position and connections are liable as a consequence of the deviation, whatever it may be. And secondly, no matter how judiciously the instrument may be introduced, yet in order that it may remain there for weeks, as inculcated by Valleix, will need on the part of the female, if she wish to escape accident, more than ordinary vigilance. I will not speak of the dangers of injury to the mucous surface of the womb, of lacerations, of the hazard of impaling herself, etc., if due caution be not observed by the patient. These are accidents which are the legitimate and necessary results of either ignorance or carelessness in the promiscuous use of these instruments, and can not occur without placing in more or less jeopardy the safety of the patient. The instruments which are employed for the purpose of entering the uterus, and which have given rise to the discussion in the Academy, are of two kinds: 1st. The uterine sound, which is known as Simpson's sound—but it is now admitted that Recamier had several years previously employed a similar instrument, which was soon afterward adopted by Amussat. The uterine sound is used as a means of diagnosis, and it is also available in restoring the uterus to its natural position, but is not intended, as is

object, has suggested an operation, which has proved highly successful in his hands. The operation is simple and rational, and is performed as follows: Having placed the patient in a convenient position on the bed, he applies the potassa cum calce to the posterior lip of the os uteri, and also to the corresponding portion of the vaginal wall; a slough is soon formed, and falls off; inflammation of the two surfaces is the consequence, and adhesion takes place between the vagina and posterior surface of the os uteri. The effect of this adhesion of the os posteriorly is to draw the body and fundus of the uterus forward, and maintain them in their natural position. I think well of this operation, and shall have recourse to it in the case before us. "Now, my good woman, if you will consent to what I think best to do for you, I will endeavor to relieve you of your sufferings, and restore your womb to its proper position. I can not readily perform the operation here, but if you say so, I will go to your house, and do what I can for you." "I will submit, sir, to any thing to get well." "Then, madam, I will be at your house to-morrow, at eleven o'clock." You will recollect, gentlemen, that I have had recourse on one occasion to this method of Amussat, and with decided success.

It will be well for the patient to take, for the present, occasional small doses of epsom salts, for the purpose of acting on the bowels. This, perhaps, will be better than any thing else until the uterus is replaced, for the reason that the salts will bring away serous discharges, which will encounter no difficulty in passing the contracted rectum.

SORE NIPPLES IN A PRIMIPARA FROM NURSING.—Mrs. W., aged twenty-two years, married, the mother of one child, four weeks old, applies for advice in consequence of the extreme pain she experiences every time the child is put to the breast. "How long, madam, have you suffered from this pain?" "I began to suffer from it, sir, about four days after the birth of my child, but I am in such agony now, that I don't know what to do." [The Professor examined the breasts, and discovered the cause of this woman's sufferings to be sore nipples.]

the intra-uterine pessary, to remain permanently in the uterus. I have spoken to you on former occasions of the value of this sound as an instrument of diagnosis, and you have seen me repeatedly resort to it for this purpose; 2d. The intra-uterine pessaries, which are intended not only for the replacement of the uterus, but for its permanent restoration, for which latter purpose they are retained within the organ for a greater or less period, depending upon the particular circumstances of the case. These pessaries are of various construction, and there is a difference of opinion as to who originally suggested them, whether Simpson, Kiwisch, Amussat, or Velpeau. They consist of the wire pessary, sometimes called the pubic pessary, having a stalk which enters the cavity of the uterus, while the other extremity rests on the pubes; then there is the spring pessary, the galvanic pessary, consisting of zinc and copper, the ball pessary with a stalk, and lastly, the dilating pessaries employed in stricture of the cervix uteri, sterility, etc.

This patient, gentlemen, presents one of the most vexatious annoyances of the lying-in chamber, and you will often be baffled in your attempts to remedy it. It is a case of sore nipples, or, as it is sometimes called, fissured nipples. The suction of the child's mouth irritates the delicate integument surrounding the nipple—inflammation ensues, and then the nipple becomes cracked or fissured. Every time the child is applied to the breast, the fissure is opened, bleeds, and is a source of intense suffering to the patient. The application of the child to the breast, under these circumstances, is a constant struggle between maternal affection on the one hand, and physical distress on the other. This affection proves obstinate and rebellious to remedies, for the reason that while the child continues to nurse, there is no time for the healing process; the fissures are being constantly opened afresh, and hence, oftentimes the protracted duration of the malady.

It is said that the prevention of disease is a great point in medicine, and I think the maxim is fully exemplified, and presents peculiar force in the question now under consideration. It is a good practice, and one which I am in the habit of pursuing, to prepare the nipples for nursing; this is what is termed the process of hardening, and is a very simple matter. About two months before the expected confinement, direct the female to make gentle traction of the nipple, with the finger and thumb, at least once or twice every day, or frictions with brandy and water, tincture of myrrh, etc. Under this treatment, the integuments lose their irritability, and are enabled to resist the impression of the child's mouth. This, however, is merely the preventive treatment; let us now see what is to be done when the affection really exists. There is a long catalogue of remedies for sore nipples, but unfortunately they are more numerous than efficient.

As I have before remarked to you, the only difficulty in the successful management of these cases, is the constant repetition of the cause of the inflammation, viz.: the nursing of the infant, so that in the treatment of this affection, we are reminded somewhat of the web of Penelope—what is done by night is undone by day. Should your attention be called to a case of this kind, before the fissures have formed, when there is simply redness and pain in the nipple, you will occasionally be enabled to arrest further progress, by the use of some mild astringent, such as the following: alum whey; sulphate of zinc gr. ij to ℥j of rose-water; tincture of catechu or myrrh; a solution of borax; tincture of kino, etc. When the fissures have formed, I have found nothing as a local application, superior to the nitrate of silver gr. x to ℥j of water. If the mother's health should decline from the sufferings incident to this affection, it will be absolutely necessary to wean the child, or provide for it a wet-nurse. Sometimes I have succeeded in relieving this affection, by suspending for two or three days, the application of the infant to the breast, with a view of allowing the fissures to heal, but you must

recollect that in such cases you will be between Scylla and Charybdis, for while, through the temporary withdrawal of the child from the breast, you may succeed in relieving the sore nipple, you may, without due caution, inflict upon your patient a more serious malady—mammary abscess.

Therefore, in all such instances, remember that you are to adopt at once those remedies best calculated to prevent engorgement of the milk ducts, which is the true cause of milk abscess. These remedies are the following: Gentle frictions on the breast with warm oil, which will tend to promote a flow of milk through the nipple, and thus prevent undue distention; and at the same time, you must not neglect the capital point, under such circumstances, of purging your patient with saline medicines. Nothing better for this purpose, than the following, of which a wine-glass may be taken as occasion may require:

R	Sulphat. Magnesiae	℥ iss
	Infus. Rosar c.	℥ viij

Fl. Sol.

Be careful that the patient is restricted in the quantity of her drinks, while the infant is weaned from the breast. Nipple shields, to which is attached the cow's teat, or the gutta-percha teat, are highly recommended, but according to my experience, in the great majority of instances, they are useless.

CONVULSIONS IN A LITTLE BOY, TWO YEARS OLD, FROM EXCESSIVE GENERAL BLOOD-LETTING—INFANTILE THERAPEUTICS—GENERAL AND LOCAL DEPLETION; THEIR COMPARATIVE SAFETY.—John W., aged two years, is brought to the Clinique by his mother, who says he had an attack of pleurisy about three weeks ago, was bled twice in one day from the arm, and in one hour after the second bleeding, he became restless, rolling about the bed, and was very soon attacked with convulsions. "Was that the first time your child had an attack of convulsions." "Yes, sir, he was always a healthy fine boy until he took the pleurisy; and he was bled so much that I am sure it nearly killed him." "How many convulsions has he had since he was bled?" "Six, sir." "He appears to be very weak, does he not?" "Yes, sir, he is not like the same child." This case, gentlemen, is one of unusual importance in a practical point of view, and I am happy to have an opportunity of presenting it to you, as it affords me an occasion to make a few general remarks on the subject of infantile therapeutics, than which there is no topic of deeper interest to the practitioner who proposes to devote himself to the treatment of the affections peculiar to infancy. There are in the system of the young child certain prominent and characteristic features, both physiological and pathological, which are not only important to be remembered, but which are lucid commentators of the normal and morbid phenomena peculiar to that tender age.

You all understand the preponderance and extraordinary activity of organic life in the young infant; and your attention has been often called to the extreme susceptibility of the nervous system, especially the medulla spinalis, which is the active and ruling nervous center of this period of existence. If the young child enjoy a high degree of organic life, and be enabled in this way, through the activity of the nutritive processes, rapidly to develop the various tissues of the system, it must be remembered, also, that its powers are easily prostrated either by disease or injudicious medication. In a word, the vital forces of the infant are readily depressed, but they have at the same time great facility of recuperation. There can be no doubt—and the fact is almost universally admitted—that the child sustains blood-letting badly; its nervous system, from its striking susceptibility, becomes affected in a very marked manner, and among the phenomena indicative of this form of excessive depletion will be jactitation and convulsions, and the latter are more likely to occur if syncope should have been produced. There is an interesting connection between convulsions and losses of blood, and the connection has been abundantly established by experiment. When an animal is bled to death, its dissolution is preceded by convulsive spasms; both Sir Charles Bell and Marshall Hall have shown that the convulsion is not the consequence of loss of blood sustained by the brain, but by the spinal marrow. You, therefore, perceive the necessary and direct connection between the vascular and nervous systems, and when you recollect the peculiarities of the latter in the young child, you can not but appreciate the value of great judgment in the employment of so powerful a depressor as general blood-letting. While I would not, in all cases, interdict a resort to the lancet in the treatment of infantile diseases, yet I would say to you, *Be careful, you have in that instrument a double edged-weapon, one which in incautious hands, may produce disastrous results.*

As a principle, allow me to suggest, that, when bleeding is indicated in the child, local is preferable to general depletion; but you are to bear in mind that serious results may also arise from the abstraction of blood locally, if not confined to proper limits. The great point, gentlemen, which I desire to impress on you is this: the young child is inadequate, from the peculiarity of his organization, to sustain large bleedings; and when the abstraction of blood is indicated, all things being equal, local in lieu of general blood-letting should be resorted to. It is not, perhaps, on this occasion out of place to caution you against the too free employment of blisters in the treatment of infantile disease; without great caution in their use, they do much harm. The loss of sleep produced by their local and constitutional irritation is most injurious to the child; besides, much is to be apprehended from the secondary effects of the cantharides, viz., ulceration and gangrene. The application of blisters, both in the child and adult, is apt to be followed by distressing pain in passing

water, known as strangury, which means literally the passing of urine drop by drop. One of the best remedies for this state of things will be found a combination of hyoscyamus and camphor: for an adult, one of the following pills may be taken every two hours until relieved:

℞ Extract Hyoscyam. }
G. Camphoræ } āā gr. xij

Divide in pil. No. vj

For an infant, the tincture of hyoscyamus may be given, say from three to six drops, in a tea-spoonful of sweetened water every two hours, or what is better, when applying the blister, let it be previously sprinkled with powdered camphor. This will almost invariably prevent the distressing effect of the cantharides on the urinary organs. It is well also to bear in mind that camphor is a valuable remedy in various other irritations of the bladder. In the case of the little boy before us, I have no doubt that we have an example of convulsions from irritation of the medulla spinalis, caused by the excessive abstraction of blood. The therapeutic indication here is to fortify the system, and endeavor by appropriate treatment to regain the loss which has been sustained. "How are your child's bowels, my good woman?" "They are quite regular, sir; but he has no appetite, and is very restless at night."

Treatment.—I would recommend for this child the following course of treatment:

℞ Syrup Iodid. Ferri ℥j

Ten drops three times a day; and the nourishment to consist of animal broths, the yolk of a soft-boiled egg, etc. In order to procure sleep, and at the same time with a view of quieting the nervous system, he should take at night ten drops of the following, or three grains of Dover's powder:

℞ Tinct. Hyoscyam. ℥ss

NEURALGIA OF THE RIGHT LABIUM EXTERNUM IN A MARRIED WOMAN, AGED TWENTY-FOUR YEARS.* Mrs. E. returned to the Clinique to-day, and says she has been very much relieved by the treatment which had been recommended for her. You will not, gentlemen, have forgotten this case; it was one of excessive pain in the right labium, and all that was recommended was an issue on the side of the lumbar vertebræ with strong nitric acid. You will remember the reasoning employed on the occasion, and the return of this patient with the avowal of improvement, is satisfactory evidence that there was a good basis for the remedy suggested. It is an instructive example of disease, and the result, so far, has been most satisfactory.

* Page 443.

LECTURE XXVII.

Mother's Milk, the proper Nourishment for the Infant—Analysis of Human Milk contrasted with that of the Cow and Goat; Causes which disqualify the Mother from Nursing her Child; Requisites necessary in a Wet-nurse; Absurd Practice of *cramming* Wet-nurses; Bringing up the Infant by Hand—rules for; When should the Child be Weaned? Fashionable Mothers; Neglect of the young Infant; Milk deteriorates by being retained in the Breast.—Jaundice in a Woman seven Months Pregnant—Why is Jaundice dangerous to the Foetus?—How is the Blood which passes from the System of the Foetus through the Umbilical Arteries elaborated in the Placenta?—Foetal Circulation—Transmission of Hereditary Disease—Puerperal Convulsions.—Vaccination; origin of—Is Re-Vaccination necessary?—Does Vaccination lose its Efficacy by Transmission?—At what Age should an Infant be Vaccinated?—Mode of Vaccination—Is it proper to Vaccinate during the existence of a Cutaneous Disease?—Signs of genuine Vaccination—Spurious Vaccination.

GENTLEMEN:—I have told you that the parent's milk is the proper nourishment for the new-born infant, and also how important it is to the health of the mother, when not contra-indicated by disease or other circumstances, that she should nurse her child. Milk, whether in the human subject or in animals, is composed essentially of the same elements, the difference being only in the relative proportion of these constituents; and to us it is an extremely interesting fact that the proportion of the constituents, as a general rule, varies according to the special necessities or wants of the young of the particular animal. But, perhaps, you can better appreciate the fact by analyzing the following table, which furnishes the relative proportions of the elements found in the milk of woman, the cow, and goat:

	Casein.	Sugar.	Butter.
Human Milk.....	32	36	29
Cow's Milk.....	63	28	40
Goat's Milk.....	80	40	40

There is, as you perceive, a striking difference in the proportions of the principle constituents, the casein, sugar, and butter; for example, in human milk the casein is to the sugar and butter as 32 to 65; in the cow the casein is as 63 to 68; while in the goat it is in the proportion of 80 to 80. You can not, certainly, as intelligent students, observe this variation in the milk without asking why this discrepancy in the relative proportions? The solution of this question is not only important, but

is full of interest. While in human milk the proportion of casein is 32, in the milk of the cow it is 63; and the reason of this difference is, that the calf, almost simultaneously with its birth, walks, and, therefore, the necessity for an early development of muscular fibre, which is accomplished through the casein of the milk. The new-born infant, on the contrary, does not walk, does not need this early growth of muscular tissue, and, therefore, nature has not felt the necessity of supplying it with the same quantity of casein. But, again, the new-born infant, though it does not need rapid muscular development, receives relatively a larger supply of respiratory food, and hence the remarkable disproportion of casein and respiratory food in the milk of the human female and cow—in the former it is as 32 to 65, while in the latter it is as 63 to 68.

I need not pursue this inquiry further to impress upon your minds the constant evidences furnished by science of the beauty, harmony, and wisdom displayed by the Creator, in the adaptation of means to the wants of all living things. It is an edifying subject for contemplation, and is replete with rebuke to those who, in their ignorance or stupidity, have charged upon our profession the unfounded slander that its study leads to infidelity! The study of medicine, so far from leading to infidelity, is constantly developing truth, and bringing before the mind the irresistible proof of design; and, therefore, its tendency is unequivocally to direct thought to the Divine source, from which emanate all wisdom and perfection in arrangement.

Although, all things being equal, it is far better, both as regards the well-being of mother and child, that the parent should nurse her infant, yet there are certain conditions of the maternal system which would not only not justify this duty, but which imperatively require that it should not be performed. Among these conditions may be enumerated the following: Consumption, scrofula, hæmoptysis, syphilis, dropsy, the various cutaneous diseases, an irascible temper, etc. If, therefore, any circumstance should forbid the nursing of the infant by its mother, the question arises—What is the best substitute for the parent's milk? Why, undoubtedly, the milk of a healthy wet-nurse; and this leads me to make a few observations touching the qualifications of an efficient and healthy nurse. 1st. As a general rule, a woman is most competent to fulfill this duty between the ages of twenty and thirty-five years; 2d. She should be free from all existing or hereditary disease, and possess a cheerful and agreeable disposition; 3d. Her child should not be more than two or three months older than the one she takes to nurse—and usually it is better, especially when a new-born infant is to be nursed, that the milk of the wet-nurse be as recent as possible; 4th. If the menstrual evacuation should have returned, it is, I think, an objection, although this is not the universal opinion. It does seem to me that the catamenial discharge, if it exercise no other bad effect, diminishes the

quantity of the phosphate of lime in the milk, which we have seen is material to the wants of the young infant; 5th. It can scarcely be necessary to say that pregnancy contra-indicates the propriety of nursing; 6th. Good teeth, healthy gums, a sweet breath, and personal cleanliness, are essential requisites for a good nurse; 7th. It is extremely important to ascertain that both breasts are in good condition, for sometimes there is milk only in one breast, and in this case the child must suffer; 8th. Are the nipples healthy—are they developed, so that the infant can grasp them readily? 9th. Is the milk of proper quality, and is it nourishing? One of the best evidences of the affirmative of this question is the child of the nurse—if it be healthy, well-developed, and presents all the indications of a thriving child, this is pretty strong testimony that the milk is of good quality.

There is a very simple mode of testing the quality of the milk, which may be done in the following manner: Place a drop on the finger-nail, having the nail somewhat inclined, and if, when it falls from the nail, it leaves a whitish mark, it is good. Again, if in pouring two or three drops of milk into a glass of water, the water should become slightly clouded, and gradually afterward become clear, it is an evidence that the milk is of proper quality. 10th. As a general rule, women from the country make better wet-nurses than those reared in the city.

The milk of a healthy and efficient nurse is oftentimes materially injured by the too prevalent error of over-feeding. A woman, for example, accustomed to plain but nutritious diet, and under such diet, in the enjoyment of robust health, is selected by some family of wealth as a wet-nurse. With the natural anxiety of the parents that their infant may thrive, every care is taken to *cram* the nurse with the richest food, and, in addition, she is well supplied with porter, toddies, etc. At the same time that her diet is thus suddenly changed, there is also a marked change in her habits. Previously, with a wholesome diet, she was accustomed to constant exercise in the open air, and enjoyed uninterrupted health. Now, under a species of stuffing, she is confined within doors, and becomes, as it were, a sort of fixture in the nursery. What, under such a condition of things, can be expected but deranged health, and milk unsuited to the wants of the infant? A little common sense and reflection would suffice to show that, instead of deranging the system by filling it with food it can not digest, and curtailing the exercise to which it had been accustomed, every precaution, on the contrary, should be taken to preserve the health by nutritious but simple food, and adequate daily exercise, etc.

Let us now suppose, however, that the mother can not nurse her child, neither can a wet-nurse be obtained. What, in such case, is to be done? The infant must then be brought up, as it is familiarly called, by hand. On account of the facility with which it can be obtained, fresh cow's milk is the most suitable article of food for the young infant,

but if you will only remember, gentlemen, the analysis of cow's milk when contrasted with human milk, you will readily understand why it should undergo a modification, in order that it may be suited to the system of the infant. In cow's milk there is an excess of casein, with a comparative diminution of saccharine matter. Therefore, in order to diminish the former, and increase the latter, let the milk be diluted at first with two thirds water, adding to it sugar, for the purpose of supplying the deficient saccharine material. In the course of two or three weeks, let the dilution be one half water to one half milk, and in two months the infant may take the milk undiluted. It may also be mixed with barley-water, rice-water, carefully-prepared gruel, strained panada-water, etc. Great care should be taken in the preparation of the infant's food, and not more should be provided at a time than can be consumed by the child. This latter precaution will necessarily involve some little trouble, but the mother, whose special duty it should be to supervise the preparation of her child's food, will be abundantly compensated for any trouble it may involve by securing to her infant what is most to be desired—good health. Many an infant has been sacrificed for the want of proper care in this particular, and a constant supervision, therefore, should be exercised. The child should not be fed with a spoon; it is far preferable to let it suck from a bottle—the *biberon*, as it is termed—through a cow's teat, or a gutta-percha teat, or, what is now found an excellent substitute, one made of softened ivory. The advantage of the latter is, that it is liable neither to alteration nor an unpleasant odor, and is kept clean without difficulty.

When should the infant be weaned?—This is an interesting question, and its solution depends upon a variety of circumstances—such, for example, as the health of the mother or nurse, the health of the infant itself, the season of the year, etc. If the mother has a good breast of milk, and she suffers no inconvenience from nursing, she should not wean her child, as a general rule, under a year, and it is important to select for this purpose, if possible, the season of the fall or winter. I do not mean to be understood to say that the child, if nursed for a year, should be confined rigidly to breast-milk during that period. On the contrary, nature very broadly indicates when the infant may take with impunity other diet, and this is when dentition has fairly commenced, and the first teeth have pierced the gums. The teeth are intended for a special purpose, viz.—to masticate the food before the process of deglutition is called into action. Fluids do not require mastication, and therefore it is in obedience to the counsels of nature to give the child, as soon as it has cut the first teeth, something more substantial than fluids. But what shall this food consist of? The breast of chicken, lamb-chops, tender beef, etc., chopped into the minutest possible fragments, may be given, very little at a time, with decided benefit, say at nine or ten months, if there be nothing to contra-indicate this change; also, the infant may take

nicely-prepared chicken or beef-tea, with the crust of bread, or crackers, softened and broken up in it. All this, however, is a matter of judgment, which must depend upon the individual circumstances which may surround each case.

In concluding these general remarks upon the subject of lactation, I may observe to you that in all cases in which an infant at the breast fails in its health, without any ostensible cause, it will become necessary to ascertain whether it may not be owing to the improper character of the milk; for, remember, that this is not unfrequently an occult cause of the decline and death of the child. The milk, for example, may be too rich, or it may be deficient in its ordinary elements; in either case it will prove injurious, and you perceive, therefore, how important it is to ascertain the existence of either of these circumstances, in order that the necessary remedy may be promptly applied, viz.: the substitution of another nurse or the weaning of the infant. You are not hastily to infer that because a child languishes in health, it, therefore, necessarily requires medicine. Thousands of children have found an early grave from this false reasoning, and the equally false practice which it has suggested. You all remember the case of the little child, one month old, which was brought to the Clinique some time since; it had, from its birth, been affected with diarrhoea, and the intestinal irritation resulted in convulsions. The child had received no nourishment but its mother's milk; on examining the milk we ascertained that it was loaded with colostrum, the peculiar uses and nature of which we have already discussed. We directed the mother to procure a wet-nurse for her child. This was done, and you have not forgotten that the infant was returned to the Clinique perfectly restored. Not one atom of medicine was administered, for the simple reason that it was not needed. The disturbing cause was the improper food; this was changed, and the child, as a matter of course, recovered.

There is an extremely interesting fact connected with lactation to which it is important, for the moment, to allude. It has been shown that milk drawn from the cow only *once* in twenty-four hours is not only less abundant and rich in butter than when taken every eight or ten hours; but also, that the milk first drawn in the pail is always more serous, while that which is taken last becomes richer in cream. It is impossible, with these facts before us, not to deduce from them a principle absolutely essential to the health of the infant. Some fashionable and wayward mothers, forgetting that their first duty should be to their child, are in the habit of allowing a long interval to intervene between the applications of the infant to the breast; for example, the well-adjusted toilet can not be deranged, the child must wait until its thoughtless mamma has gone her rounds of out-door visits, or completed the period allotted to her brilliant home receptions. Oftentimes, in this way, many hours elapse, and the child, though hungry and suffering, is not put to

the breast, if, indeed, it even have a thought passed upon it. Under these circumstances, the milk becomes changed, it is unfitted for the nourishment of the infant, and the latter, neglected by its parent, languishes and dies! What a commentary upon the follies of life; what a sad picture of maternal heartlessness! But, thank God, these examples are comparatively few, and become, as it were, insignificant in contrast with the undying love and self-sacrificing devotion so generally exhibited by mothers toward their offspring. In a healthy breast, the secretion of milk is in proportion to the frequency with which it is emptied; so that, a strong child, with suction sufficient to obtain a full draught of nourishment, receives a much more nutritious fluid than the delicate infant whose powers are so feeble as scarcely to enable it to extract more than a modicum each time it is put to the breast. I am confident that this condition of things is often the cause of continued bad health in the child, a cause, too, which usually escapes observation. In all such cases, the mother should be instructed to have her breast drawn two or three times a day by another child, or what will do equally well, a pup, so that when her own child nurses it may be furnished with suitable aliment. This is an important direction, which, if faithfully carried out, will be the means of protecting many an infant from the supposed necessity of medication, and preserving its life by providing it with what it is most in need of—proper nourishment. You see how much depends upon just discrimination, and how frequently and rashly we employ medicine without the slightest indication for its use.

JAUNDICE IN A WOMAN SEVEN MONTHS PREGNANT—WHY IS JAUNDICE, DURING PREGNANCY, DANGEROUS TO THE FÆTUS?—HOW IS THE BLOOD, WHICH PASSES FROM THE SYSTEM OF THE FÆTUS THROUGH THE UMBILICAL ARTERIES, ELABORATED IN THE PLACENTA?—TRANSMISSION OF HEREDITARY DISEASE.—Mrs. T., aged twenty-three years, married, seven months in gestation, presents an example of aggravated jaundice. She is as yellow as an orange, and the whites of the eyes deeply tinged with bile. "How long, my good woman, have you suffered from jaundice?" "I began to turn yellow, sir, about six days ago, and I have been getting worse every day." "How is your urine?" "It is just like saffron, sir." "Do you feel sleepy?" "Yes, sir; I can scarcely keep my eyes open, I am so heavy and dull." "How are your bowels?" "They are very much confined, sir." "Have you noticed the color of your evacuations, when any thing passes from you?" "Yes, sir, what I pass is like lumps of clay."

There are, gentlemen, several points of interest in this case, to which it is important briefly to allude. In the first place, this patient is laboring under a severe attack of jaundice, a disease, under ordinary circumstances, perfectly manageable and without danger; yet it will sometimes assume a serious aspect, and, if not properly treated, may result fatally.

In jaundice, the bile does not pass in its usual abundance through the ductus *communis choledochus* into the duodenum, but mixes with the blood, and in this way the yellowness of the cutaneous surface is accounted for. It is an interesting fact for you to remember that, as a general rule, when the skin is of a deep yellow in this disease, it is a more favorable symptom than when the color is light and undefined; usually in these latter instances, it has been found that jaundice is the result of some serious organic affection of the liver, and more especially of schirrus of that organ. Again, in these cases, there is very little, if any, bile in the urine. When the urine is loaded with bilious matter, it may be regarded as a favorable indication, for the reason that an outlet is furnished for the passage of the biliary secretion which would otherwise be in such rapid accumulation in the blood as to depress the powers of the system, and more especially the brain. In severe cases of jaundice, when the disease proves fatal, death usually ensues from coma; this latter condition being the result of the action of the biliary poison on the cerebral mass. Sometimes, however, death will be preceded by convulsions, and in this case the poison acts not on the brain, but on the medulla spinalis, and its continuation in the encephalon, for you have been told that convulsive muscular movement can not occur except as a consequence of irritation, direct or indirect, of the spinal cord. You see from this how important it is in all cases in which the bile becomes absorbed into the circulating fluid, and, therefore, an irritant, that prompt measures should be adopted to restore the biliary secretion to its legitimate channels, and thus protect the system against harm.

But, gentlemen, there is a special point of interest in the patient before us, to which I have as yet made no allusion—she is in her seventh month of gestation, and consequently is surrounded, in this attack of jaundice, by more than ordinary danger, both to herself and the foetus she carries in her womb. If she be not relieved, the danger to herself will be twofold—either coma or convulsions. Again, if this biliary poison be suffered to remain in her blood, the foetus will be exposed to imminent peril, and it may be destroyed either by convulsions or imperfect nutriment, in consequence of the unhealthy condition of the mother's blood. Let us for a moment examine this subject. When describing to you the anatomy and offices of the placenta, I told you that this mass is divided into a maternal and foetal portion, and that it possesses in its structure, composed essentially of blood-vessels, two circulations, which are entirely distinct and independent of each other. On the maternal surface, the circulation is carried on through the utero-placental vessels, while on the foetal surface, it consists of the passage of blood through the vessels of the umbilical cord—the two arteries and one vein. There is between these two orders of vessels, on the maternal and foetal surfaces no continuity of canal; that is, the vessels on the foetal surface have no direct communication with those on the maternal surface, but,

at the same time, the radicles of the umbilical arteries and vein do communicate with each other by direct canal. Now, with a simple glance at the manner in which the blood circulates through the system of the fœtus, and is again returned to the placenta, you will be prepared for the question—How is the blood which is brought back to the placenta elaborated? The blood-vessels immediately engaged in the fœtal circulation are those found in the umbilical cord, viz.: one vein and two arteries. Though called a vein, yet this vessel possesses the function of an artery, for it conveys arterial blood from the placenta to the fœtus, and in the same way, the umbilical arteries perform the office of veins, for they return the blood which has lost its nutritious properties in its round through the system of the fœtus, to the placenta.

When the blood is thus returned to the placenta, for the purpose of becoming purified, it does not pass into the system of the mother, for you have just seen that there is no direct communication between the fœtus and mother, but the elaboration is accomplished as follows: The blood in the radicles of the umbilical arteries receives, through a species of percolation, oxygen and albuminous matter from the maternal arteries, and thus becoming, as it were, decarbonized, it again enters upon its round of circulation through the fœtus, being immediately taken up by the radicles of the umbilical vein. Mialhe has shown that albumen can not pass through membranes, but we know that albumen is necessary to the nutrition of the fœtus, and he has developed the interesting fact that a substance is formed from albumen, called *albuminose*, which has the power of percolating membranes, and it is this substance from which the fœtus in utero derives its nourishment. Robin and Verdeil have demonstrated that what was supposed by Guillot, Le Blanc, and others, to be casein, in the blood of pregnant women and nurses, is essentially albuminose, which, after all, is similar to casein and kiestine.

From what has been said, it must be evident to you that when the blood of the pregnant woman is impure, either from the accumulation in it of bile, or any other poisonous matter, the fœtus which is nourished by that blood, must necessarily be exposed to more or less danger. There is another interesting feature connected with the condition of the blood in the pregnant female, and it is this: It is not uncommon to find women attacked with eclampsia or puerperal convulsions bring forth dead children; sometimes when the child is not destroyed, it will itself have convulsions immediately after birth; I have seen two remarkable cases of this kind, which have already been reported. With the doctrine that convulsions are but the results of irritation upon the spinal cord, either through poisonous blood or some other influence, the explanation of the transmission of the convulsive movement to the fœtus is readily explained. The poisonous elements contained in the mother's blood are communicated to the embryo through the act of percolation of which I have spoken, and these elements will produce, *cæteris paribus*,

morbid effects on the latter, precisely similar to those observed in the system of the mother. Allow me here to make a remark in reference to the transmission of disease from parent to offspring. That this hereditary transmission is more or less constantly taking place, is a fact unhappily too well established, and it constitutes a veritable blight upon the race. Scrofula, syphilis, phthisis, carcinoma, etc., all of which I hold to be constitutional taints, may be transmitted either by the mother or father, and this will depend upon whether the former or latter be affected with the malady thus transmitted. For example, a scrofulous mother will pass the disease to her child through the ovule which she furnishes, that very ovule being a part of her system, containing either the elements of health or of disease, just precisely as the case may be. Suppose, again, the mother is free from all taint of scrofula, syphilis, etc., yet, under these circumstances, either of these affections may be propagated by the father, should he have the misfortune to labor under the infliction of either of them, or of any other constitutional malady capable of transmission, and it is propagated through the spermatozoa which he throws off during sexual intercourse, and which, as you know, is the true and essential fecundating liquor.

Treatment.—I shall order for the patient before us the following treatment: Let her take the subjoined powder to-night, and in the morning, ʒj of Epsom salts in ʒ viij of water:

℞ Submur. Hydrarg.	. . . . .	gr. x	
Pulv. Ipecac.	. . . . .	gr. j	<i>M.</i>

After she has been freely operated upon by this medicine, should the yellowness of the skin still continue, she will be much benefited by alterative doses of mercury under the following form:

℞ Hydrarg. c. creta	. . . . .	gr. xij
		<i>Div. in chart. vj.</i>

One powder to be taken every third night, followed the next morning with ʒj of Epsom salts.

VACCINATION OF AN INFANT AGED THREE MONTHS.—Mrs. J., the mother of one child, three months old, brings her infant to the Clinique to be vaccinated. She says she is much alarmed, because there is a case of small-pox in the neighborhood.

The subject of vaccination, gentlemen, is one which deserves full attention. You are aware of the circumstance which led to the important discovery that the introduction of vaccine matter into the system is a protection against small-pox. The circumstance to which I allude is this: In the latter part of the last century, the fact was observed that cows are subject to a peculiar pustular eruption on their teats, and that those engaged in milking them, if they contracted the eruption, enjoyed an immunity from small-pox. This, as you may readily imagine, was a fact of too much moment to be passed by in silence, and accordingly, under

the able observation and experiments of Dr. Edward Jenner, the simple circumstance noticed in the humble milk dairy has become not only a matter of history, and constituted an important and interesting era in our profession, but has greatly diminished the bills of mortality by pointing out to us the means of protecting the human family against a most fearful and loathsome disease. Jenner, in the pursuit of his investigations on this subject, maintained the following points: 1st. That the essential difference between cow-pox and small-pox is the comparative virulence of the two affections, the cow-pox being the milder form; 2d. That persons vaccinated with matter taken from the cow, resisted inoculation by variolous matter. 3d. That the preservative influence of vaccination against small-pox is perpetual in the same individual, and, therefore, re-vaccination is not necessary.

This latter proposition has, within recent years, called forth much disputation, and there still exist differences of opinion on the subject. Those who contend that Jenner was in error, base their argument upon the fact that in certain epidemics of small-pox, persons who had previously been vaccinated became affected with the disease; and they, therefore, conclude that after a certain time the vaccine matter loses its impression on the system, and that re-vaccination is absolutely necessary. In whatever way this question may ultimately be decided, one fact seems to be abundantly proved, viz., that small-pox is comparatively extremely rare after vaccination, and that it always assumes a milder type. It seems to me, however, that the necessity of re-vaccination depends strictly upon the solution of the following question—When small-pox occurs after vaccination, is the proof positive or equivocal as to the character of the vaccination, or, in other words, was the vaccination genuine or was it spurious? If the latter, nothing surely is proved; if the former, it is demonstrated simply that after genuine vaccination an attack of small-pox is possible. But in order to give this latter admission its true value, and derive from it practical deductions, it is material to investigate the subject further, with the view of another development, viz.: How stands the proportion of cases in which small-pox occurs after healthy vaccination, with the proportion in which the vaccine proves a preservative against the affection? Suppose, for example, it should be shown that this proportion is insignificant; then, it appears to me, all that can be proved is, that an attack of small-pox, after a genuine vaccination, is nothing more than a rare exception to a very general rule. Again, is it not a well-ascertained fact that an individual may have a second attack of small-pox? Undoubtedly. But this, too, may be regarded as a very rare exception. If, in a word, the disease itself, under certain circumstances, may be reproduced in the same individual, it would seem absurd to claim, even for genuine vaccination, what is not conceded to a first attack of small-pox, viz.: universal protection. But the popular mind is in favor of re-vaccination—and now

it becomes a question whether you are justified in pandering to popular prejudice by repeating the operation. My answer to this query is a very plain one—no bad results follow re-vaccination, and as it may sometimes prove useful, more especially in cases in which the first vaccination was spurious, and as it quiets apprehension, you should not refuse to re-vaccinate when requested to do so.

Does vaccine lose any of its efficacy by long-continued transmission from one to another?—It is maintained by many that it does—and it is, therefore, suggested that the vaccine should be taken, at certain intervals, from the cow, in order that its full effects may be insured. This is a point, however, about which there is some doubt; and there are valuable statistics recorded which tend simply to show that the continued transmission of the vaccine from person to person does not subject it to deterioration. In connection with this subject, it may be stated that matter taken fresh from the cow, when inoculated into the system, is usually followed by more constitutional disturbance than in vaccination under ordinary circumstances; so that while, under the influence of continued transmission, its activity may, so to speak, become somewhat diluted, yet it is by no means proved that it also becomes inefficient.

At what age should an infant be vaccinated?—There is much difference of opinion on this subject—some say at ten months, others at six months, others at four months, and others again at two months. It is very evident that in the event of an epidemic of small-pox, or even of its existence in the sporadic form in the immediate neighborhood, the question of age should have no influence—the great question being the protection of the child against the affection. Therefore, in such case, the vaccination should not be delayed, but had recourse to immediately, even if the infant be but a week old. As a general rule, if the bad health of the child should not contra-indicate it, I vaccinate from one month to six weeks of age. This I think a judicious period for the operation; and one thing is very certain—if without sufficient cause the vaccination be delayed beyond this time, and small-pox should by any possibility develop itself, the physician would never be forgiven, and for all time he would be held accountable for any result that might ensue. This latter consideration, therefore, in the absence of any valid objection to the practice, is, in my judgment, a good argument in favor of early vaccination. When the choice of season can be consistently made, I think the fall and spring preferable to the winter or summer. It has been shown that no age is too advanced for vaccination, and that it will succeed at any period of life, provided the individual has not been attacked with small-pox.

Mode of vaccinating.—This is a simple operation, but yet it requires some care. So far as the ultimate result is concerned, it matters not on what part of the body the virus is introduced, but, as a general rule, the arm is selected just below the deltoid muscle. It is customary with some

practitioners, more particularly among the Germans, to insert the vaccine virus into both arms at the same time, or, if confined to one arm, to make several incisions at a little distance from each other, in order to insure a number, say three or four vesicles; and it is even asserted by high authority that consecutive small-pox never occurs in cases in which there are over four cicatrices from the first vaccination. All that I can say on this subject is, that, according to general experience, I believe it will be found that if the matter be genuine and fresh, and it be properly inserted, the system will be abundantly protected by one vesicle; and with the latter, the constitutional, as well as the local disturbance, will be much less than when there are several punctures, and, consequently, several vesicles. The matter employed for this purpose may consist of the lymph taken from the vesicle between the sixth and tenth day, though the lymph is considered purest and most fit for use when taken between the sixth and eighth day; or a paste may be made of the scab, which exfoliates and falls off between the eighteenth and twenty-fifth day. The scab I much prefer to the lymph, for it is more under control, and may be preserved for a longer time, and with less difficulty than the lymph. If the latter be employed, the following is the mode to be adopted: The point of an ordinary lancet is to be gently introduced into the vesicle between the sixth and tenth day, and then the lymph is received on the convex surface of small pieces of quill prepared for the purpose. Some practitioners, however, prefer introducing the lancet into the vesicle, and having both sides of the point armed with the virus, make a small puncture in the arm of the infant to be vaccinated; this, though an old mode of vaccinating, and one still in fashion, is not thorough. I much prefer, if the lymph be used, to have it on the quill, and then with the lancet a very slight scarification of the arm should be made, crossing the lines at right angles; as soon as this is done, the convex portion of the quill should be gently rubbed over the scarified surface—the matter in this way is more perfectly absorbed. If the scab be employed, it is first to be made into paste with cold water, and then introduced upon the scarified surface. After the vaccination, the arm should be exposed to the air, in order that the surface may become dry, and also that the virus may not be removed by the friction of the dress. After this, all that is necessary is to place loosely around the arm a small bandage of old linen.

Is it proper to vaccinate during the existence of a cutaneous disease?—On this subject there is much discrepancy of opinion. Some maintain that the vaccine vesicle will modify, and even remove any cutaneous affection that may exist, while others state that an eruptive disorder, no matter of what kind, will prevent the absorption of the vaccine virus, and, therefore, nullify its protective influence against small-pox. Jenner himself entertained this latter opinion, and it is not without advocates at the present day. It does not seem, however, to be sustained by facts. I

have been obliged more than once during the prevalence of small-pox to vaccinate infants affected with eruptive disease, and I have not experienced any difficulty in producing a genuine vesicle, but I certainly have noticed, under the circumstances, a gradual giving way of the antecedent eruption. This may not always be the case, but I am inclined to think the mere existence of a cutaneous affection is no objection to the vaccination of an infant, when there is danger to be apprehended from small-pox. On the other hand, I should not advise, as a general rule, vaccination during the presence of an eruptive disease; in this latter case, it should only be resorted to when, from the prevalence of an epidemic, or other circumstances, the probability of contagion is enhanced.

Signs of genuine vaccination.—It is very important to note the progress of the vesicle after vaccination, in order that a just distinction may be made between the spurious and genuine. In the latter, nothing special is observed for the first two or three days after the inoculation; but, usually, at the end of the third day, and sometimes later, a small red spot is apparent, and on the fourth day the redness is more decided; on the fifth day, the vesicle begins to distend with a serous exudation; on the sixth day, the vesicle assumes a circular or oval form, with a whitish surface, and presents an umbilicated appearance; on the seventh day, the vesicle becomes more full, and the inflammation extends to the sub-cutaneous cellular tissue; on the eighth, and sometimes not until the ninth day, the vesicle attains its maximum of development, and is surrounded by a scarlet redness; at this time the tumefaction increases, sometimes involving the glands in the axilla, and there is more or less febrile excitement; on the tenth day, the circle surrounding the vesicle begins to lose its redness, the inflammatory symptoms subside, the serous exudation assumes a purulent character, dessication commences, and the vesicle becomes changed into a circular scab of a mahogany color, which falls off between the eighteenth and twenty-fifth day after inoculation. The exfoliation of the scab is followed by what has not been inaptly termed a honey-comb cicatrix. There is a difference of opinion as to the permanence of this cicatrix; the general belief is that it never disappears, while others claim that it is not only not indelible, but that its absence is no proof whatever that previous genuine vaccination had not taken place. In spurious vaccination, the phenomena proceed differently; for example, the period of incubation does not exist; instead of an exudation of lymph, there is a purulent secretion from the third or fourth day; a scab will sometimes form, and exfoliate on the fifth day, and become reproduced again, simulating in this respect what is observed in the different kinds of ulcer. Again, in spurious vaccination, it sometimes happens that many weeks elapse before the scab falls off, and whether it exfoliates early or later, it is not succeeded by the peculiar form of cicatrix characteristic of the genuine or healthy inoculation.

In 1845 an interesting discussion took place in the French Academy

of Sciences on the subject of vaccination, and the following is an analysis of the report on that subject :

1. Vaccination is absolute as a preservative for the great majority, and temporary for a small number ; even in the latter it is preservative until adolescence.

2. Small-pox rarely attacks those who have been early vaccinated, before ten or twelve years of age, from which period, until thirty or thirty-five years, they are more liable to the disease.

3. Besides its preservative power, vaccination modifies the symptoms of small-pox by diminishing its duration and danger.

4. The vaccine matter fresh from the cow develops symptoms of greater intensity, and is more certain in its effects than old vaccine ; but after a few weeks transmission through the human economy, it does not produce the same degree of local disturbance.

5. The protective nature of vaccine does not appear to be necessarily dependent upon the intensity of the symptoms it produces ; yet, in order that it may not lose its preservative influence, it should be obtained fresh from the cow as often as possible.

6. The only and direct source for the regeneration of vaccine matter, after it has lost its properties, is the cow.

7. Re-vaccination is the only mode of distinguishing those of the vaccinated who are completely protected from the small-pox from those who are only more or less partially protected.

8. Successful re-vaccination is no positive proof that the individuals would have, in the absence of re-vaccination, contracted small-pox. It is only presumptive evidence that they were liable to it.

9. Under ordinary circumstances, re-vaccination should be resorted to at the end of fourteen years, but much earlier if there should be an epidemic of small-pox.

LECTURE XXVIII.

Pulse in Infancy—How Influenced—Examination of the sick Child—Maximum, Minimum, and Average Pulsations in the Infant.—Tympanites Intestinalis, with obstinate Constipation in a married Woman, aged thirty Years, the Mother of one Child, aged two Years—Supposed Pregnancy.—Dr. O'Beirné's Method of Extricating Flatus from the Intestinal Canal.—Chorea in a Girl, six Years of age, from Fright—Connection between Chorea and Rheumatism—Value of Gymnastic Exercises in the Treatment of this Affection.—Abortion three successive times in a married Woman, aged thirty-one Years, during the Period of Lactation.

GENTLEMEN :—The pulse is an important guide in our appreciation of disease in the adult; and in the derangements of infancy it is also a valuable index. In the latter, the physician in forming an opinion of the nature and extent of morbid action, can expect no assistance from the intelligence of his patient. The infant does not enjoy the advantage of speech; it has no power of articulation, no means of communicating its sufferings. The medical man, therefore, is restricted in his facilities of diagnosis, and is confined in great measure to what has been aptly termed the language of expression—that language which, when properly understood, is a faithful exponent of the physical condition of the infant; and hence, we find great attention has been paid to the changes of countenance, and the aspect of the features as illustrative of the various morbid conditions to which the young child is liable. I have alluded, you will remember, to this subject on a former occasion, and for the present I propose to call your attention to a few points touching the pulse in early life. There are many circumstances, other than disease, calculated to modify the pulse of the infant. As a general rule, it is more quiet and less rapid during sleep; sudden mental emotion will accelerate it, and it is asserted by Trousseau that, after the third month, it is more frequent in girls than in boys, thus at this early period assuming the distinctive characteristic which marks it in after life. You will occasionally observe a curious circumstance connected with the pulse in young infants, and it is proper that I should caution you against a false deduction. The circumstance to which I allude is this—an habitual irregularity in force and rapidity of pulse in children who are in the enjoyment of excellent health. Authors have, with good reason, directed attention to this peculiarity; and you perceive that, in the infant as in

the adult, there may be a departure from the normal beats of the heart without necessarily being the result of disease. How frequently, for example, are these discrepancies recognized in individuals; one man in undisturbed health will have an average pulse of forty, another one of ninety, etc. These facts are familiar to the observant practitioner, and are to be attributed to what is termed constitutional idiosyncrasy.

I do not think I can guard you too strongly against the effect of fright in the young child, not only as regards the rapidity of the heart's action, but in reference, too, to other forms of nervous disturbance. Fright will produce convulsions in one case, chorea in another, diarrhœa in a third, paraplegia, etc. The ridiculous habit prevalent among foolish nurses and weak-minded mothers of holding the doctor up to the little child as a bug-bear, the very personification of terror, is one that has exhibited its bad results in thousands of instances. How often is the phraseology employed, "If you don't be good I'll send for the doctor, and he will bleed you," or "he'll cut your head off!" And pray, allow me to ask, what kind of a personage is that doctor so cruelly wronged by the thoughtless nurse, or foolish mother? Is he not, at least should he not be regarded as the dearest friend of the household—is not his office a high one—nay, does he not fulfill a most sacred duty, and in the darkest hour of affliction, when the contest with death is most fearful, and the result full of doubt, is not every eye fixed upon him as the only being, under Providence, who can lull the storm, and bring comfort to the lacerated heart! Why, then, should folly place him in a false position? Away with the absurdity, and let it be your duty to impress upon mothers that the stronger the affection of the child for the physician, and the more closely he looks upon him as a friend, the greater, *ceteris paribus*, will be the probability, when true skill is required, of victory over disease. The physician, when he approaches the couch of the invalid child, should do all in his power to divest his presence of every thing bearing on terror; he should, in a word, possess that important attribute so much needed in the sick room as well as in other situations of life—the *savoir faire*. A cheerful smile, the taking his watch in his hand, and presenting it to the little patient, any thing in fact to divert the attention, will oftentimes remove all apprehension, and prevent those numerous perturbations which are so apt to mask the true nature of disease, and lead the practitioner to a false diagnosis.

It is far better, as a general rule, to examine the condition of the child when asleep, especially the pulse; how much, for instance, can be learned from the expression of countenance, the breathing, the beating of the heart, etc., when liberated from the influence of any external excitement? If these phenomena are irregular, and beyond the record of normal or healthy action, the absolute departure from this standard can be much better appreciated when not complicated by any momentary

disturbance, such as would be likely to follow emotions of any kind. In one word, in your judgment of the nature and intensity of disease in the young child, you must be cautious to discriminate between the influence of positive morbid action and the influence of transitory causes, between which and true disease there is a wide difference. Authors have endeavored to approximate the number of beats in the infant pulse during health, and there is a great want of concurrence in their statements. In order that you may form some estimate of this discrepancy of opinion, and have before you a fair statement of the general views on this subject, I present you the following table, for which I am indebted to the valuable work of Rilliet and Barthez.

TABLE OF THE NUMBER OF PULSATIONS AT THE DIFFERENT AGES OF INFANCY.

Age.	Max.	Min.	Average.	Authors.
At birth.....	94	72	83	<i>Lediberder.</i>
Four minutes after birth.....	208	140	160	<i>Lediberder.</i>
First day.....	156	96	126	<i>Jacquemier.</i>
First day.....	160	100	123	<i>Gorham.</i>
Four to twenty hours.....	112	88	101	<i>Farge.</i>
One to eight days.....	160	96	128	<i>Gorham.</i>
One to eight days.....	140	76	106	<i>Farge.</i>
One to ten days.....	180	80	—	<i>Billiard.</i>
Eight to fifteen days.....	124	104	112	<i>Farge.</i>
Two to twenty-one days.....	104	76	87	<i>Valleix.</i>
Fifteen days to one month.....	164	120	137	<i>Trousseau.</i>
Fifteen days to one month.....	140	120	127	<i>Farge.</i>
One to two months.....	150	60	—	<i>Billiard.</i>
One to two months.....	158	96	136	<i>Trousseau.</i>
Two to three months.....	110	70	—	<i>Billiard.</i>
Two to six months.....	162	100	128	<i>Trousseau.</i>
Six months to one year.....	140	100	113	<i>Trousseau.</i>
Five months to two years.....	158	100	130	<i>Gorham.</i>
Seven months to thirty-one months.....	140	106	126	<i>Valleix.</i>
One year to twenty-one months.....	140	96	118	<i>Trousseau.</i>
Three to five years.....	110	72	98	<i>Rilliet & Barthez.</i>
Six to ten years.....	104	64	84	<i>Rilliet & Barthez.</i>
Eleven to fifteen years.....	80	60	70	<i>Rilliet & Barthez.</i>

TYMPANITES INTESTINALIS, WITH OBSTINATE CONSTIPATION, IN A MARRIED WOMAN, AGED THIRTY YEARS, THE MOTHER OF ONE CHILD AGED TWO YEARS—SUPPOSED PREGNANCY.—Mrs. O., married, aged thirty years, the mother of one child two years old, is in delicate health, and is excessively nervous, with an enlarged abdomen, and habitual constipation. She believes she is pregnant, having, as she says, felt the movements of the child. “How long, my good woman, have you had this enlargement of your abdomen?” “I have had it off and on, sir, for several months.” “Then it sometimes diminishes in size, does it?” “Yes, sir, and I always feel better and less distressed when my bowels are moved,

but that is my great trouble." "When did you first feel the movements of your child?" "About three months ago, sir." [The patient was placed on the bed, and the abdomen was found to be very much distended, causing an enlargement equal to the ninth month of pregnancy. After a full examination, the Professor remarked that the enlargement was due altogether to flatus, constituting a case of tympanites intestinalis.]

This form, gentlemen, of abdominal distension is often met with in nervous women, especially those who are more or less predisposed to hysteria. The first point of interest in the case is the enlargement, which might possibly be mistaken for pregnancy—a delusion under which the patient before us has labored, as I shall presently prove to you. In a married woman this error, though awkward, if committed by the practitioner, would be comparatively harmless; but in the unmarried, in whom of necessity such a blunder would involve the dearest prize of woman—character—the consequences would be momentous. The second point of interest is, What has produced the distending agent, the flatus? And, thirdly, What is the best mode of removing it, and restoring this woman to health? In my lectures on midwifery, when speaking of gestation, I have told you that women of a nervous temperament are apt to imagine they feel the movements of the fœtus, when in fact no pregnancy exists. This delusion often arises in cases of tympanites, in which the passage of the air from one portion of the intestine to the other is mistaken for the active motion of the child. These delusions are quite common in hysterical women, and the practitioner must exercise a due degree of vigilance, otherwise he, too, may fall into error, and give endorsement to that which has no existence. The patient before us entertains a strong conviction that she is pregnant, and I have had some difficulty in dissuading her from that impression. The sensations which she has experienced, and which she has mistaken for fœtal movements, are nothing more than the ordinary results of the tympanites with which she is affected.

In all these cases, however, when the conviction of the patient is firm as to the existence of gestation, the practitioner should not express an opinion without having previously made a thorough vaginal examination—for it must be recollected that, in some instances, pregnancy may co-exist with large collections of flatus in the intestinal canal. Before introducing this woman here, I made the necessary examination, and I find the uterus to be in a perfectly normal state, entirely unaltered in size. She is not pregnant. Now, as to the origin of the flatus in these cases of tympanites: You will generally observe that the accumulation of air in the intestinal canal is more or less connected with defective digestion, and, therefore, is most commonly met with in hypochondriacal and nervous persons. There is no doubt that the mucous membrane of the stomach and intestines, and, indeed, under certain circumstances, the

various mucous surfaces of the economy, are endowed with the property of secreting gas, and, therefore, the process of secretion will sometimes explain its presence. But a prominent cause of intestinal flatus is unquestionably traceable to the ingesta, more particularly of the vegetable kind. It is also true that air may be taken into the system in the act of deglutition. Although the expulsion of the flatus from the intestines is always followed by more or less relief, yet it occasionally happens that the patient is unable to extricate it, and the suffering is consequently very great. This inability to expel the gas was ascribed by the old schoolmen to a paralytic condition of the intestinal muscular fibres—the paralysis being due to one of two causes, viz., over distention, or defective nervous power. This explanation of the early Fathers is not without some degree of foundation.

Treatment.—In the management of tympanites intestinalis, two objects are indicated: 1st. The evacuation of the gas; 2d. The prevention of its re-accumulation, by improving the digestive functions. It will sometimes be necessary to resort to mechanical means for the purpose of extricating the flatus, and you will find the elastic tube recommended by Dr. O'Beirne an admirable instrument for this object. It is introduced into the rectum and carried up the bowel for several inches above the promontory of the sacrum. The flatus escapes through the tube, and the patient experiences almost instant relief. With a view of restoring the functions of the digestive apparatus, various remedies are employed. In some cases, there may be collections of excrementitious matter in the intestines. Under these circumstances, it is of the first importance to have this matter evacuated, which may be accomplished by either of the following medicines:

℞ Olei Ricini }
Terebinthinæ } aa ʒj

℞ Pulv. Jalapæ gr. xij
Sup. Tart. Potassæ ʒj M.

When the bowels have been properly evacuated, any of the following medicines will be found more or less beneficial:

℞ Ext. Colocynth c. }
Saponis } aa gr. ij
Olei Junip. gtt. ij
Fl. Pil.

The above pill to be given twice a day.

℞ Decoct. Aloes ʒj

To be taken once or twice a day.

℞ Gum Camphoræ gr. ij
Ext. Colocynth c. }
Sulph. Quiniæ } gr. ss
Fl. Pil.

This pill to be taken once in four or five hours.

Iron, in its various preparations, is quite serviceable in these cases.

R	Carbon Ferri	gr. xxiv
	Pulv. Rhei	} aa gr. xij
	Pulv. Zingiberi	
	Ext. Gentianæ	

Ft. Massa in pil. xij dividenda.

One pill three times a day.

I should not omit to mention the efficacy of cold water. It is an ancient remedy, one suggested by Hippocrates himself. A tumbler of ice-water will sometimes, by its tonic impression on the intestinal canal, be followed by the happiest effects. This, too, was a favorite remedy, in these cases, of Cullen. All articles of diet which easily ferment should be scrupulously avoided; and you know, therefore, that vegetable food, as a general principle, should not be allowed.

CHOREA IN A GIRL, SIX YEARS OF AGE, FROM FRIGHT—CONNECTION BETWEEN CHOREA AND RHEUMATISM.—Elizabeth H., aged six years, is brought to the Clinique by her mother, who feels much anxiety in consequence of nervous twitchings with which her daughter has been affected for the last two years. "Do you know, madam, what first occasioned this disease in your little daughter?" "Indeed, I do not, sir, unless it was a fright she took." "When was she frightened, madam?" "About two weeks before she began to twitch, sir." "What was it that produced the fright?" "She saw two men fighting, sir, and she was afraid they would kill her."

The case before you, gentlemen, is an example of chorea, known in ordinary language as St. Vitus' Dance. The latter term, it is said, owes its origin to the fact that certain women of deranged mind were in the habit of repairing annually to the chapel of St. Vitus, where they spent the night and day in dancing. The only limit to the dance was the exhaustion of those who participated in it. Chorea is essentially a disease of childhood, but it is not exclusively confined to that period. Instances of it are occasionally observed in the adult, and also in old age. It exhibits itself most frequently between the ages of ten and fifteen years, and is often recognized in the female at the approach of puberty. To a disinterested spectator, the contortions of countenance, and singular evolutions characterizing this affection, present an idea of the ludicrous. Not so, however, with the parent, whose melancholy office it is to witness the accompaniments of this disease in the person of her own child. Her heart is torn by the most exaggerated apprehensions, and the vista through which she looks is indeed one of unbroken gloom. Happily, however, the malady ordinarily yields to judicious treatment, and it becomes our duty, as well as our pleasure, to assuage the grief of the parent by the assurance of recovery.

In conversation with the mother, we learn that the child before us, two weeks previous to the appearance of the affection, became fright-

ened. This is important intelligence—for among the causes of chorea, fright holds a prominent place, and is, I think, much more frequent in its operation than is generally supposed. You remember the case of little Hooker, who was brought here a few weeks since from New Jersey. His was a well-marked case of chorea produced by fright on seeing a horse run away. This disease is fortunately not of frequent occurrence. During a period of ten years, among 32,976 patients, admitted into the Children's Hospital at Paris, of which 17,214 were boys, and 15,763 were girls, chorea was observed only 189 times, and the following are the statistics of its occurrence as given by Rufz :

Age.	Boys.	Girls.	Total.
One to four years.....	3	2	5
Four to six "	2	3	5
Six to ten "	16	45	61
Ten to fifteen "	30	88	118
	<hr/> 51	<hr/> 138	<hr/> 189

From this table, which is amply confirmed by the observation made both in hospital and private practice, it will be seen that chorea occurs much more frequently in the female than in the male. If to this be added another important fact, that the disease manifests itself often about the advent of puberty, and also, under certain circumstances, during pregnancy, it is not unreasonable to suppose that it is frequently connected with irritation of the uterine organs, and what confirms this view, is, that in young women it will sometimes spontaneously subside with the appearance of the catamenial function, and in pregnancy, immediately after parturition. Chorea is a disease consisting essentially in abnormal contractions of one or more series of muscles, and these contractions appear to be quite independent of the brain. You are aware that the influence of the spinal cord over muscular action is well proved, and experiments have demonstrated that for the production of flexion, extension, adduction, etc., the cerebral mass is not at all necessary, and other muscular phenomena also occur independently of any action of the brain. These facts, which are now well understood, have been shown by the decapitation of animals. A very simple circumstance, which you have no doubt frequently noticed, is the fact that a chicken, after its head is removed, will perform numerous muscular evolutions, all of which are of course independent of the brain, and accomplished through the agency of the spinal cord. The spasmodic muscular contractions characteristic of chorea, become suspended during undisturbed sleep ; but, according to Marshall Hall, they are apt to recur if the patient dreams. Dr. Bright, I believe, was the first to call the attention of the profession to what he supposes to be a connection between chorea and rheumatism ; both articular rheumatism, and rheumatic pericarditis,* and his opinion

* I have no doubt that patients affected with chorea have often been supposed to labor under disease of the heart, because of the recognition by the stethoscope, of

is now advocated by a number of clever writers. It is the opinion of Seè, who has devoted much study to the subject, that chorea, in many instances, occurs after an attack of rheumatism, or co-exists with it. He, indeed, regards it as a rheumatismal affection. It may, I think, be questioned whether these two affections do positively bear such relation to each other. That rheumatism does occasionally present itself as a complication of chorea, I admit, but that there is a necessary alliance between the two affections, I am, for the present, at least, much disposed to doubt. We have had, in the Clinique, thirteen cases of chorea, and in only one instance, could we trace any connection between it and rheumatism. You will remember the case of Mary Owen, aged nine years, who had become overheated by play, and was afterward exposed to a shower of rain. The next day she was attacked with inflammatory rheumatism, which continued for five weeks. On her convalescence, chorea developed itself.

Causes.—Chorea may be produced by intestinal irritation, such as worms, constipation, vitiated secretions, fright, cold, etc.; it is also sometimes the result of imitation, and on this account it is judicious, as far as practicable, to separate a child affected with this disease from others who are in health. This direction applies particularly to boarding-schools and hospitals. The change produced in the system of the female at the advent of puberty constitutes another cause of this affection.

Symptoms.—These vary infinitely; usually, the first indication will be twitchings in the muscles of the face, and these are followed by irregular contractions of the various portions of the muscular tissue, unsteadiness in the gait, etc. The twitchings are sometimes limited to one portion of the body, such as one arm. Chorea is occasionally complicated with paralysis, and cases are recorded in which paralysis existed on one side, and the full development of chorea was displayed on the other. It is not unusual to find the twitchings increased by the presence of the physician; and now you will observe, when I ask this little girl to place this tumbler to her mouth, how strangely she attempts to do it. In a word, as you perceive, in every attempt she makes, the most singular, if not ludicrous motions ensue. Speech and intellect are sometimes slightly affected in this disease. Its duration is variable, from one to six months.

Diagnosis.—The hysteric paroxysm, catalepsy, epilepsy, tetanus, and other morbid conditions of the nervous system, have been enumer-

the bellows-murmur. But you are not to forget that this sound will be emitted by the vessels of the neck and aorta, where the organ is entirely free from disease, being caused altogether by the anæmic condition of the patient. May it not, therefore, be that the confounding of these two sounds may have had something to do with the supposed relation between rheumatism and chorea? At all events, proof must accumulate in order to settle the question definitely.

ated by writers as being possibly mistaken for, and confounded with, chorea. The probability of such an error can scarcely be conceived with ordinary care.

Prognosis.—As a general rule, chorea is under the control of medication; and, therefore, a favorable opinion may be given as to the issue. It rarely proves fatal. In one hundred and fifty-eight cases cited by Sée, there were but nine deaths. Sometimes, however, relapses occur, and it is important to inform the friends of the possibility of such an event.

Pathology.—The pathology of chorea has provoked much controversy. It is admitted, by general agreement, that the irritation is in the nervous system; but whether in the brain or medulla spinalis, is a question on which exists a difference of opinion. Marshall Hall believes the irritation to be in the spinal marrow, while Todd and others refer it to the brain itself.

Treatment.—Here, again, we have differences of opinion. Sydenham and Cullen, two great names in the medical calendar, recommended blood-letting and purgatives; and these views were generally adopted by the men of their time. This system of therapeutics appears now, however, to meet with but little favor, and, we think, with good reason. As a general principle, chorea will be found an affection connected more or less with diseased or defective nutrition, and, therefore, calls for invigorating remedies. But, gentlemen, chorea, like all other affections, must be treated on rational principles. You have seen in this Clinique two interesting cases of this disease, which we traced to intestinal worms, producing irritation in the medulla spinalis, and in this way provoking the muscular spasms characteristic of the malady. The worms were dislodged, and you remember the gratifying results in both cases—entire restoration to health. Arsenic has had its advocates, and justly so, as a remedy in chorea, but is often without benefit. Some very remarkable and satisfactory reports have been made with regard to the efficacy of the sulphate of zinc in this disease, and I have myself observed the best results from its administration. The case before us, I think a proper one for its trial, and we shall, therefore, order the following course to be pursued:

R	Sulph. Zinci	.	.	.	.	.	.	℥j
	Extract Gentianæ	.	.	.	.	.	.	℥ij

℞. massa in pil. xx. dividenda.

One pill a day, increasing gradually to six a day. In addition to the pills, I shall recommend a generous diet, and regular exercise in the open air, and also the shower-bath every morning. "Oh! sir, I have tried the shower-bath for my child, and it almost puts her in fits." "I am much obliged to you, madam, for that information; the shower-bath must be omitted." There are, gentlemen, certain temperaments and idiosyncracies which can not sustain the shock of the shower-bath. Under such cir-

cumstances, obstinately to insist on its use would often result in serious consequences.

Iron, judiciously employed, is an important remedy in chorea. The hydro-cyanate is preferred in Germany, while in England the carbonate is the more popular form. From three to eight grains of the former, and 3ss doses and upward of the latter, according to the age of the patient.*

ABORTION THREE SUCCESSIVE TIMES IN A MARRIED WOMAN, AGED THIRTY-ONE YEARS, DURING THE PERIOD OF LACTATION.—Mrs. H., married, aged thirty-one years, the mother of three children, says she has miscarried on three different occasions during the time she was nursing her children. "How long, my good woman, have you been married?" "Thirteen years, sir." "How many children have you had?" "Three living children, sir, and I have lost three by miscarriage." "When did you miscarry the first time?" "My child, sir, was just twelve months old when I had the first miscarriage." "Were you nursing at the time?" "Yes, sir." "And how was it with the other two miscarriages?" "They took place, sir, in the same way, while I was nursing." "How long did you nurse your children?" "I nursed them all until they were twelve months old, and I should have nursed them longer had it not

* It may be interesting to note the beneficial results of gymnastic exercises in the treatment of chorea, as exhibited in the Hôpital des Enfants, of Paris. Dr. Sée has made some important statements on this subject. Since 1847, there were ninety-five children affected with chorea, sometimes so obstinate as to resist every devised method of treatment, and all were cured, either by gymnastics alone, or in connection with other means. Dr. Sée remarks, that in applying these exercises to chorea, care should be taken to graduate them to the severity of the case. They are to be repeated daily, not longer than fifteen or twenty-five minutes, in order to avoid fatigue and palpitation. Improvement, he says, is sometimes noticed even after the first lesson, and, at the latest, after the fifth or sixth, so that at the end of a week, judgment can be formed as to whether the treatment will prove efficacious. If at this time manifest progress has not been made, it is doubtful whether a cure will be accomplished. Dr. Sée has observed, that when other remedies are conjoined with the gymnastics, the proportion of cures is less, and the period of their attainment later; and he suggests that no other means be employed than good diet.

The sulphurous baths, as recommended by Baudelocque, constitute another remedy of great value, there having been fifty-eight rapid and positive cures in sixty-five cases. Thirty drachms of sulphuret of potash are added to each bath, at a temperature of 91°. The bath to be used one hour, daily. Usually, amendment is perceptible after the second or third bath, but sometimes not until after twelve or fifteen days, a mean of twenty-two days having served for the cure of fifty-seven cases. Where the cure is retarded, it ordinarily depends upon the patient's powers being lowered by other remedies, or insufficient diet, upon irritation of the skin induced by the bath, or upon acute inflammation of the internal serous membranes—circumstances contra-indicating the baths. The conjunction of other remedies rather retards than aids the cure. Deducting the cases in which the bath was improperly used, there remain but nine true failures in eighty-one cases, these being almost all examples of recent or rheumatic chorea.—*Brit. and For. Medico-Chirurgical Review*, Jan. 1852, p. 75.

been for the miscarriage." "Were you a strong, healthy woman while you were nursing?" "I was, sir, for the first eight or nine months, but after that I found I grew rather weak." "Did your courses come on during your nursing period?" "Yes, sir, they always came on about the ninth month."

The case of this patient, gentlemen, presents one or two peculiarities worthy of note. In the first place, she has become pregnant on three different occasions while nursing her children, and this you are aware is rather an exception to the general rule; and secondly, she has miscarried each time. There is no subject of more interest to the practitioner than that of abortion, and it is also one in which the health of the patient is materially involved, for frequent abortions tend to a marked disturbance of the vital forces. Women whose menstrual function returns during lactation are much more apt to become impregnated than those in whom the catamenia is suspended; and it is a fact of importance to be remembered that if lactation be continued after pregnancy has occurred, abortion may be regarded not as an unusual result. One, therefore, of the practical deductions to be drawn from a knowledge of this circumstance is to enjoin upon the female the necessity of weaning her child as soon as her state of pregnancy is ascertained. But let us examine, for a moment, why it is that lactation exercises an influence in the production of abortion. The causes of abortion, as I have remarked to you on former occasions, are numerous, and may be divided into those of a centric and eccentric origin. Among the former may be enumerated mammary irritation, and this, especially in cases of protracted lactation, is very likely to induce premature action of the uterus, and the consequent expulsion of its contents. It often happens in these cases of prolonged suckling that there is a deficiency of the milk secretion, and this but adds to the irritation of the mammæ, as the child is constantly making traction on the breast without securing a passage of sufficient milk, and the irritation, through the sympathy existing between the mammæ and uterus, is readily communicated to the latter organ upon the principle, of which we have so often spoken—*reflex action*. In this way contractions of the uterus are provoked, which terminate in abortion.

But women, no doubt, occasionally miscarry during the nursing period from another cause than mere mammary irritation; for example, you have had in the Clinique many cases of anæmia from undue lactation, and you have seen how much the general system becomes disturbed under the operation of this bloodless condition of the economy. Anæmia, therefore, strictly so called, may be classed among the causes of abortion not only in nursing-women but also in women under other circumstances. In females of a cachetic habit of system, whose health has become dilapidated by protracted disease, and in whom the circulation is marked by great languor, there will oftentimes exist a chronic

leucorrhœal discharge; in such, you will observe as a frequent accompaniment of this general impairment of the health, a hemorrhagic discharge during pregnancy, which almost always results in abortion. Miscarriages are, as a general rule, much more frequent during the earlier months, say the first two or three, of pregnancy, and this, I think, may be explained as follows: 1st. The adhesions between the caduca and internal surface of the uterus are at this time comparatively feeble; 2d. The placenta is, as it were, in its formative stage, and has not become, so to speak, sufficiently condensed to resist the operation of certain causes of abortion which, at a later period of gestation, prove inoperative; 3d. In women of nervous temperament, and more especially in primiparæ, the uterus is more likely to be thrown into action soon after impregnation than at a later period, when it becomes more accustomed to, and can sustain with more or less impunity the successive developments consequent upon gestation.

Treatment.—The patient before us requires a tonic treatment—the waste her system has undergone must be repaired. She is, as you perceive, quite anæmic, partly in consequence of undue lactation, and partly from her repeated abortions. I shall recommend the following course:

℞	Sulphat. Quinæ	.	.	.	.	.	.	gr. xxiv
	Extract Gentianæ	.	.	.	.	.	.	℥ij
	Pil. Rhei c.	.	.	.	.	.	.	℥iv

Ft. massa in pil. xxiv dividenda.

One pill three times a day, with nutritious diet, consisting principally of succulent meats and broths, and half a pint of porter daily. An injection of cold water into the rectum at night, and an occasional cold hip-bath will have a good effect in giving tone to the uterus.

LECTURE XXIX.

Thoughts on Uræmia; what is Uræmia?—Is Albuminuria always followed by Uræmia?—The Cause of Albuminuria.—Do Puerperal Convulsions and Albuminuria stand in the relation of Effect and Cause?—Urea, is it a Poison?—Treatment of Uræmia—Colchicum and Guaiacum; their Influence over the Secretion of Urea.—Conclusions.

GENTLEMEN :—Nothing, perhaps, more clearly indicates the progress of mind in our profession than the recent valuable researches in reference to the healthy and morbid states of the urine. The deductions drawn from these researches by observers, if not always sound, afford at least a new field for inquiry, and invite the coöperation of all who are zealously engaged in the pursuit of truth. Until within comparatively a short period, authors were silent on the subject of the poisonous properties contained in the urinary secretion, or, at least, they did not attach to it that specific interest, which late discussions have excited; and hence the term *toxæmia*, or blood-poisoning, was not employed, as it now is, to denote a very peculiar and important condition of the economy. While *toxæmia* is the generic term, there are various species or grades of blood-poisoning; and I propose, for the present, to limit myself to the consideration of that form denominated *uræmia*.

The existence of *uræmia* has been differently explained by authors; for example, some contend that it is due to the presence of albumen in the urine, others that it is caused by urea in the blood, while, again, both of these opinions have been rejected, and a new one advanced, viz., that *uræmia* results from the transformation of urea into the carbonate of ammonia. It will not be denied that these are interesting questions, and involve much that is important in the treatment of disease. They, therefore, merit a careful and minute examination, which I propose to institute under the following heads: 1st. What is *uræmia*? 2d. Is albuminuria always followed by *uræmia*? 3d. What is the cause of albuminuria? 4th. Is urea a poison? 5th. What is the true explanation of *uræmia*? 6th. What is the treatment of *uræmia*?

What is uræmia?—*Uræmia* consists in disturbed action of the two nervous centres—the brain and spinal cord—producing either coma, partial or complete convulsive paroxysms; these disturbances being directly traceable to the action of the peculiar poison constituting *uræmia* on

these nervous centers. They may be affected separately or together; and hence, according to Carpenter, there may be three forms of uræmic poisoning: 1st. A state of stupor supervenes rather suddenly, from which the patient is with difficulty aroused, soon followed by complete coma, with stertorous breathing, &c., as in ordinary narcotic poisoning; 2d. Convulsions of an epileptic character, often affecting the entire muscular system suddenly occur, but without loss of consciousness. 3d. Coma and convulsions may be combined. The term uræmia is employed to denote a peculiar kind of poisoning, which, it is supposed, results from an accumulation of urea in the blood.

It will be one of my objects to examine the propriety of this term.

Is albuminuria always followed by uræmia?—That the presence of albumen in the urine is not necessarily followed by uræmia is abundantly proved by observation; and it appears to me important that this fact should be well understood, for the reason that much error has arisen from the opinion entertained by certain writers, that there is a direct connection between uræmia and albuminuria. This error is not so much owing to any inherent difficulty of the subject, as it is to that loose appreciation of facts, or, more properly speaking, to that want of healthy digestion of well-settled principles, which, unfortunately, too often characterizes the writings of professional authors. I might cite a long list of observers to show that albumen very frequently exists in the urine without any development of uræmic intoxication, but I apprehend this would be unnecessary. I shall, therefore, limit myself to two or three undoubted references. Franz Simon, for example, says he has frequently detected albuminuria in persons apparently in the enjoyment of good health; also, others have observed it in articular rheumatism, in inflammation of the thoracic organs, intermittent and typhus fevers, in measles, cholera, chronic affections of the liver, etc. In transitory renal catarrh, such, for instance, as occurs in erysipelas, nearly as often as in scarlatina, albumen, together with the well-known epithelial cylinders of Bellini's ducts, is found as constantly in the urine as in inflammatory affections of the kidneys, where it exists in connection with the fibrinous plugs from the same ducts, as in true Bright's disease.*

Edouard Robin says, "The urine becomes albuminous in croup, in ascites, and in cases of capillary bronchitis, with emphysema, accompanied by dyspnoea; in pulmonary phthisis, in gestation when sufficiently advanced to occasion an habitual congestion of the kidneys; in cyanosis, diabetes," etc., etc.†

In order to prove that albumen may exist in the urine independently of any disease of the kidney, and without any of those nervous disturbances

* Physiological Chemistry, by Lehmann, t. i. p. 345.

† Ed. Robin, London Lancet, Jan. 24, 1852, p. 96.

characteristic of uræmic intoxication, Dr. M. F. Tegart mentions the following interesting and conclusive experiment upon himself, and also confirmed in the person of one of his friends: He made for some time a portion of his ordinary nourishment to consist of half a dozen eggs, and albumen as a consequence was soon detected in his urine.*

There are but few practitioners of careful observation who will not endorse these statements. Indeed, I conceive the principle to be so well established that the existence of albuminuria is not necessarily connected with the presence of urea in the blood, that further citations can scarcely be necessary to demonstrate the fact.†

We now proceed to the examination of the third question, which is one not only of great interest to the medical man, but one which has called forth numerous and conflicting opinions, viz:

What is the cause of albuminuria?—According to Edouard Robin, the passage of albumen into the urine is the result of imperfect combustion. He maintains that urea is produced by the oxygenation of the albumen in the blood, and that if this oxygenation do not take place, the result will be albuminuria. This hypothesis has one attribute—that of ingenuity—but can its truth be demonstrated? We think not, and for this obvious reason, that when albumen passes into the urine, the quantity of urea, as a necessary consequence, should not be increased in the blood. It is, I believe, conceded, that although albumen does occasionally exist in the urine without a diminution in that fluid of urea, yet the converse of this is very often observed, viz., an increase of urea in the blood co-existing with albumen in the urine. This is in direct conflict with the explanation as given by Robin.

Dr. Williams says that "*per se*, albuminuria indicates nothing more than congested kidney." Now, we shall attempt to prove that other causes than simple congestion of the kidney will produce albuminuria; and, in doing this, it will follow that Dr. William's opinion is far too sweeping. It is quite certain that the presence of albuminuria is not traceable to any one cause, for we find it under a great variety of circumstances; and I shall endeavor to show that the passage of albumen into the urine is due to one of the following conditions: 1st. A change in the

* Thèse sur la Maladie de Bright, Paris, 1845. Gazette Medicale, Paris, 1846, p. 39.

† Recently much has been written, and questions proposed by learned academies, respecting the connection between albuminuria and puerperal convulsions; and the writers are almost unanimous in the opinion that albuminuria is the cause of these convulsions. Now, we contend that puerperal convulsions are nothing more than uræmic phenomena, as is proved by their causes, symptoms, diagnosis, pathology, etc., etc.

If, then, puerperal convulsions be the result of uræmic intoxication, they are not necessarily produced by albuminuria. There is often a co-existence of puerperal convulsions, albuminuria, and œdema, general or local; but each one of these conditions may, and has existed irrespectively of the other.

composition of the blood ; 2d. A change in the kidney, either structural or dynamic ; 3d. Pressure on the renal veins.

1st. *Change in the Composition of the Blood.*—It was a favorite doctrine of the old-schoolmen, that the blood contained certain deleterious elements, which could not continue in the system without generating disease. This, too, was the opinion of Sydenham, Pitcairn, Cullen, etc. ; and the master-minds of the present day, with all their supposed progress, are compelled to admit that there is something more than mere conjecture in what was formerly termed the “peccant humors.” The particular organs through which these humors or poisons pass from the economy are called glands ; and each gland has its specific office assigned to it—that is, one of these glands furnishes an outlet for one character of material in the blood, and another gland for a different substance. Thus, while the liver is engaged in the secretion of bile, etc., and the kidney water, urea, etc., we find the intestines the media through which certain effete materials are thrown off. These different offices are performed through what is called secretion, the true nature of which is still involved in mystery.

We understand certain general principles respecting the secreting processes, but we must acknowledge that we are unable to explain many of the phenomena connected with this fundamental part of the physical mechanism. Although, therefore, we are ignorant, if I may so speak, of many of the processes connected with glandular elaboration in a state of health, yet it does not follow that we can not explain some of the causes which, interfering with healthy secretion, result in morbid action. Now, then, in order to apply this reasoning to the question before us, we will suppose—what will not be controverted—that in most of the diseases which we have enumerated as being occasionally accompanied with albuminuria, such, for example, as cholera, scarlatina, diabetes, etc., the constituents of the blood become changed by the introduction either of a poison or some other unusual substance. If this occur, it is quite manifest that the blood is no longer normal—and because of its altered condition, its elaboration in the kidney will also be modified. In other words, in lieu of the ordinary elements contained in the urine, we shall sometimes find albumen, an absence of urea, etc.

May this not be satisfactorily explained on the principle that the product of endosmosis will be modified in proportion to the changes in the fluid on which it acts ? Again, the blood is changed in pregnancy, various circumstances tending to this modification, viz., the formation of Kiestine, the secretion of milk, the quantity of blood materials passing through the circulation of the foetus, and the diseases of the embryo itself, not to speak of its excretions, some of which we know enter the blood of the mother. These, then, being so many influences capable of altering the constituents of the blood, will they not account, in some instances, for the occasional presence of albuminuria in the pregnant female ? And

when albumen is discovered in the urine after the completion of gestation, may it not be owing to the changes in the blood produced by the milk fever, lochial discharge, etc.?

But, in my opinion, there is another circumstance which is calculated to modify in a very special manner the blood of the pregnant woman. The general rule is that, during gestation, the menstrual fluid is suppressed. Now, I am not so confident that Pliny, and many of the writers among the Arabians, did not at least approach the truth when they advanced the opinion that the catamenial discharge contained certain noxious elements. Many of their comparisons, it must be admitted, were fanciful, and some of their illustrations supremely ridiculous; but, laying these exuberances aside, I believe there is much truth in the aggregate of opinion they entertained on this subject. Most modern writers, however, are disposed to smile with something less than contempt at what they are pleased to term "the crude notions" of the early Fathers respecting the properties of the menstrual blood. The smile might be pardoned if those who indulge in it had given us something positive and well-defined touching this question, so interesting both in its physiological and pathological relations. It will be found that there exists much discrepancy of opinion on this subject by the writers of the present day. One, for example, Donné, says, "the menstrual blood, when examined by the microscope, contains, like ordinary blood, both fibrin and red corpuscles." Carpenter tells us that "the catamenial discharge appears usually to consist of blood *deprived* of its fibrin, etc." Simon says "there can be little doubt that there is fibrin in the menstrual secretion, etc." Vogel failed to detect fibrin in his analysis of the menstrual fluid. Dr. Letheby,* in his examination of this fluid, which had been retained in the uterus because of an imperforate hymen, found it to be entirely free from fibrin.

In this way, I might proceed to show the numerous conflicting statements made by recent authors as to the real nature or properties of this secretion. I have no experiments to offer with the view of demonstrating that the menstrual blood positively contains noxious materials—but I argue the affirmative of this question from certain pathological states, which we observe to follow an abnormal condition of the catamenial function. For instance, in one hundred unmarried women who may labor under suppression of the menses from the operation of any of the influences known to produce this result, such as cold, mental emotion, etc., we will discover that in at least ninety-five the suppression will be followed by more or less disturbance of the nervous system. In some, it is true, the symptoms will be light and evanescent, but in others they will assume a more marked character, sometimes even producing mania, and at others coma, epilepsy, catalepsy, chorea, etc. May not these

* See London Lancet, Aug. 2, 1845.

phenomena be due to a species of toxæmia traceable to the poison of the menstrual blood upon the nervous centers?

This opinion seems to be confirmed by the important fact that all the nervous disturbances cease with the return of the function. I have enjoyed full opportunities for observing the effects on the system of the various forms of menstrual aberration; and I have also noticed an extremely interesting and significant circumstance—a circumstance which certainly tends to corroborate the hypothesis that the derangements of the nervous system under unnatural suppression, etc., of the menstrual function, are owing to a species of blood-poisoning. The circumstance to which I allude is this: when the catamenial discharge becomes suddenly, or otherwise abnormally arrested, the urinary secretion is usually diminished in proportion to the intensity of the nervous symptoms—and what is still more significant is, that the nervous disturbance will yield in proportion to the effects of diuretic and sudorific remedies. There is no error as to the fact—its truth is readily susceptible of demonstration.

2d. *A change in the Kidney, either structural or dynamic.*—Every structural change in the kidney may result in albuminuria, but we do not yet comprehend in what essentially these various changes consist. For example, though it may be true that the presence of albumen in Bright's disease, in scarlatina, &c., may be due to a desquamation of Bellini's tubes, yet this can not be said of many other diseases of the kidney, in which albuminuria exists, but in which no desquamation takes place. Several interesting experiments have been made to prove that the urinary secretion is not absolutely dependent upon the nervous system by Segalas,* and some of a more decisive character by Dr. Brown-Sequard;† while, on the other hand, it has been satisfactorily shown that the nervous system may, under certain circumstances, exercise a marked influence over this secretion, as is demonstrated by the researches of Brachet, J. Muller,‡ and Marchand. The latter has pointed out a very important fact connected with this subject. He produced in a dog not only all the symptoms of uræmia, after placing a ligature on the renal nerves, but also discovered urea in the blood, and in the matter vomited by the dog.

Kramer states that he has detected albumen in the urine of animals, after dividing the sympathetic nerve in the neck. This, however, seems to need confirmation, as the same result has not followed the experiments of others. Dr. Sequard, after repeated trials, has failed in establishing the fact mentioned by Kramer. Budge has found albuminuria

* Bulletin des Séances de l'Acad. de Med. de Paris. (Séances des 27 Août et 23 Septembre, 1844.

† Experimental Researches applied to Physiol. and Pathol. Philadelphia, 1852-3, p. 13.

‡ Manuel de Physiol. trad. Française de Jourdan. Edité par E. Littré. Paris, 1851; t. i., p. 391.

after a puncture of the cerebellum; and Cl. Bernard* has occasionally obtained the same result after puncturing the medulla oblongata. In addition, however, to these demonstrations, we have numerous instances occurring constantly in practice illustrating the influence of the nervous centers, when laboring under disease or traumatic injury, over the urinary secretion; and it is quite possible that the irritation of the uterine nerves during pregnancy, and in many of the diseases, both organic and functional, of the uterus may, by reflex action of the medulla spinalis, produce various morbid changes in the urine. Again, it does appear to me that if it can be proved that sudden emotions, shocks, etc., have an influence on the peculiar processes by which the blood is continually ridding itself of its deleterious materials, we shall, in this way, have opened to us a new field in our investigation of disease, we shall be enabled to elucidate many morbid phenomena which have heretofore been obscure, and, as a necessary consequence, deduce rational therapeutic principles.

It is only a few days since I was called to Brooklyn to see a lady under the following circumstances: She was twenty-eight years of age, had been married two years, no children, nor had she ever been pregnant. Her health had always been good from early childhood; no menstrual irregularities, &c. Five weeks before I visited this patient, while giving some directions to her servant, who was arranging her library, a large book fell on her head. This was soon followed by vomiting, but in two or three days the effects of the concussion on the stomach passed over, and the lady thought nothing more of the matter. Within the last two weeks, however, she has noticed a gradual swelling of her lower limbs, with an increased tumefaction of her abdomen. It was on this latter account that I was requested to see her. There was evident œdema of her limbs, with peritoneal dropsy. Here, then, was not only an interesting, but a remarkable state of things. Without any manifest cause, a patient previously in the enjoyment of good health is attacked with dropsical effusion.

The only circumstance which had occurred was the blow on the head by the fall of the book, followed by vomiting. But what connection is there, it may be asked, between this transitory concussion and the dropsy? None, certainly, of a direct nature. I was, at first, utterly at a loss to account for the disease with which my patient was affected, and I requested that some of the urine should be put aside, in order that it might be examined. Accordingly, on the following day, the urine was tested, and albumen detected with no diminution of urea. It was now not very difficult to account for the dropsy—certainly not as difficult as it was satisfactorily to explain the existence of albuminuria. The serous effusion was undoubtedly the result of the albuminuria; but what caused the latter? In my judgment, the starting-point of the dropsy was the concussion of the brain—the blow upon this nervous center modified the urinary secre-

* *Comptes Rendus de l'Acad. des Sciences de Paris*; t. xxviii., p. 393.

tion, which previously had been perfectly normal, and the result of this change was an abstraction of albumen from the blood, and its presence in the urine.

This, at least, is the view I have taken of the case, and my treatment has been based upon this hypothesis. It has been essentially restorative, with the object of supplying to the blood its lost albumen. If I can succeed in accomplishing this purpose, the presumption is, if my opinion of its pathology be correct, that the case will terminate favorably. Every physician much engaged in midwifery practice has occasionally observed cases in which the foetus has died *in utero* from the effects of sudden mental emotion experienced by the mother. I think this result is susceptible of explanation as follows: The shock upon the nervous system of the parent may so modify the character of her blood as to render it destructive to the child—producing, in a word, a state of toxæmia. Now, if it be asked why this poisoned state of the blood does not also affect the mother, my answer is, that there are not only different grades of toxæmia, but there are also differences in the susceptibility to its influence. Do we not see, for instance, one woman thrown into violent convulsions from uræmia, and another, with the same amount of poison in her blood, exhibit no disturbed action of her nervous system? Surely, then, if there exist this difference in the constitution of the adult, there can be no difficulty in appreciating far greater differences in the mother and the foetus she carries in her womb.

3d. *Pressure on the Renal Veins.*—Whatever may be the other causes which operate in the production of albuminuria, there is a mass of irresistible testimony to demonstrate the positive influence of an obstructed renal circulation. G. Robinson,* Meyer,† and Frerichs, have abundantly proved that a ligature tied more or less completely around the renal veins, will cause albumen to pass from the blood into the urinary secretion; and again, when the renal veins have become obliterated, in every instance in which the urine was examined, albuminuria was detected.

Cases of this nature have been observed by Dance, Rayer, Dugès, Velpeau, R. Lee, Cruveilhier, Stokes, Blot, Leudet, etc. In gestation, and especially in primiparæ, albuminuria is often caused by the pressure of the impregnated uterus on the renal vessels. Dr. Rose Cormack, I think, was the first to call attention to this subject. In 106 multiparæ, Blot has found eleven women whose urine contained albumen, while in 99 primiparæ thirty exhibited albuminuria. The proportions, therefore, for the former are as 1 to 10—the latter as 1 to 3. This is a remarkable difference, and must be due to some special cause, which I hold to be explained as follows: Women in their first preg-

* Medico Chirurg. Transact. of the Royal Med. Chirurg. Soc. of London. 1843. Vol. viii., p. 51.

† Gaz. Med. de Paris, 1844, p. 419.

nancy have a very different condition of the abdominal walls from those who have already borne children. In the former, these walls are firm and resisting; in the latter, they are relaxed, and have lost much of their original tension. For this reason, in primiparæ the impregnated uterus is more perfectly in the line of the axis of the superior strait of the pelvis. In multiparæ, on the contrary, this organ is disposed to fall forward, constituting ante-version of the fundus.

Precisely in proportion, therefore, to the departure of the uterus forward from the direct line of ascent will be the probability of diminished pressure on the renal circulation. I believe, also, there is another reason why albuminuria is observed less frequently in multiparæ than in primiparæ. It is a well known fact, that women are much more disposed to miscarry in a first than they are in subsequent pregnancies; and, *cæteris paribus*, this is no doubt owing in a measure to the greater irritation of the uterine nerves consequent upon a first gestation, together with the increased difficulty encountered by nature to distend the uterus for the accommodation of the developing germ. May not, therefore, this excess of irritation, by modifying the urinary secretion, be occasionally a cause of the more frequent presence of albuminuria? I think so; and again, when, under these circumstances, the passage of albumen into the urine is followed by the presence of urea in the blood—as is often the case—even admitting that full uræmia does not take place, may not the nervous system become so much excited by the existence of urea as to induce premature action of the uterus, and consequently miscarriage? If there be any force in this reasoning, the preventive treatment of miscarriage in this condition of system may prove far more successful than it has heretofore been.

It is quite evident from the facts I have mentioned, that albuminuria is of frequent occurrence in pregnancy; and Cahen* has endeavored to show that it is caused by disease of the kidney. It can not be denied that disease of the kidney may co-exist with gestation, and in such case the albuminuria may be traced to the disease of this gland; but to say that albuminuria can not exist in pregnancy other than as a result of disease of the kidney, is in direct opposition to well established observation. Blot† demonstrates the fact as follows: 1st. The rapidity with which albuminuria disappears after delivery in almost every case, very often in two or three hours, sometimes in one, after the expulsion of the child; 2d. Absence of the symptoms of diseased kidney; 3d. certain characters of the urine entirely different from those of Bright's disease, as, for instance, increase in the density of the urine, and the presence of more salts, and particularly urates; 4th. In seven women, who died, and in whom albuminuria had been detected, only three had slight pathological alterations in the kidney.

The opinion is now well settled, and concurred in by a great majority

* De la Néphrite albumineuse chez les Femmes enceintes. Thèse, Paris, 1847.

† De l'Albuminurie chez les Femmes enceintes. Thèse, Paris, 1849.

of writers that albuminuria is, in many cases, simply the result of an active or passive congestion of the kidney. Any thing, therefore, capable of obstructing the renal circulation, whether it be an enlarged uterus from pregnancy or disease, an ovarian tumor, or enlargement of the abdomen of any kind, may be enumerated among the causes of albuminuria.

Christison, Rayer, and others, maintain that the diminution of urea in the urine, and consequently its accumulation in the blood, is in proportion to the quantity of albumen; but this does not appear to be invariably the case; for Bence Jones has recorded an instance of *mollities ossium*, in which he presents an analysis of the urine, showing that albuminous matter may exist in great quantity, while the amount of urea remains perfectly natural.

Is Urea a Poison?—Urea was, I believe, first discovered in 1771, by Rouelle, who detected it in the urine. It owes its present name, however, to Fourcroy and Vauquelin; it was obtained pure for the first time by Dr. Prout in 1817. There is one interesting circumstance connected with this production—it is the first instance known of an organic compound being artificially produced, which was effected by Wohler from cyanic acid and ammonia. The true nature of urea is variously described by authors, the general opinion being that it is a poison. Todd,* Williams,† Cormack,‡ Simon,§ and others, regard it in this light, and contend that its presence in the blood will occasion coma, convulsions, and other nervous phenomena. Indeed, it may be said that this has been the prevailing opinion; it is proper, therefore, that its merits should be examined.

Opinions in our science, unless fully confirmed by well-directed observation, are not abiding; they do not present that fixedness, if I may so speak, which will alone entitle them to be classed among accepted truths. If urea be a poison, capable of producing convulsions, etc., the numerous experiments made on living animals in no way establish the fact. Among others, Prevost and Dumas,|| Segalas, Tiedeman, Gmelin, Mitscherlich, Cl. Bernard, Barreswill, Stannius,¶ and Frerichs, have extirpated the kidneys, and have never known convulsions to ensue. This, it may be argued, is only negative proof. Negative, however, as it is, it must be admitted that it is testimony not without value; and to it may be added the interesting experiments of Bichat, Courten, Gaspard, Vauquelin, Segalas, Stannius, Frerichs,** and others, who, after injecting into the veins urea

* Lumlian Lectures in London Med. Gaz., 1849 and 1850.

† Principles of General Pathology.

‡ London Journal of Medicine, 1849, pp. 690 and 699.

§ Lectures on General Pathology, Amer. edit. p. 151.

|| Annales de Chimie et de Physique, v. vxiii, p. 90.

¶ Gaz. Med. de Paris, 1841, p. 168.

** Die Bright'sche Nierenkrankheit, 1851. Analyzed in Braithwaite's Retrospect, 1852, part xxv. p. 135.

and urine, never in a single instance observed a case of convulsions. Again, Bright, Christison, Rees, and Frerichs have cited cases in which a large quantity of urea existed in the blood of man unaccompanied by any of the symptoms of uræmia; and Frerichs says, in one instance in which he detected the greatest amount he had ever observed, there was no approach to uræmic disturbance. Vauquelin and Segalas, so far from regarding urea as a poison, have proposed to administer it as a diuretic.

The conclusions, therefore, from these facts appear irresistible that urea, to say the least, is not a virulent poison, its excess in the blood will not *per se* produce uræmic intoxication, nor will it explain the numerous phenomena which are so frequently found to accompany its presence in the circulation. It was in view of all these circumstances, that Frerichs attempted to demonstrate that uræmia depended neither upon a diminished quantity of urea in the urine, nor upon an excess of this substance in the blood, nor upon albuminuria; but was traceable solely to the existence of carbonate of ammonia in the system which, he says, is formed through the agency of a ferment, from the urea itself. In other words, Frerichs' doctrine is, that uræmia is exclusively due to the transformation of urea into the carbonate of ammonia. The *modus in quo* as to this transformation is not clear; there is no proof as to the manner in which it is accomplished; but the major point, viz.: the dependence of uræmia on the presence of the carbonate of ammonia, seems to rest on strong and cumulative testimony.

Many years ago, Orfila produced convulsions in an animal by giving it internally the carbonate of ammonia; the animal, after becoming convulsed, died. This fact seems to have escaped the observation of G. Zimmerman, who, in objecting to the theory of Frerichs, says "carbonate of ammonia given internally in large doses produces neither convulsions nor coma." Cl. Bernard and Barreswill have detected carbonate of ammonia in the stomach and intestines of animals after the removal of the kidneys; and Lehmann has also observed it in the matter vomited by patients affected with cholera. Christison, Jakchs, etc., have recognized, under certain circumstances, an ammoniacal odor in the blood.

Until, however, the exposition of the peculiar views entertained by Frerichs as to the true cause of uræmic intoxication, no significant value was attached by authors to the presence of the carbonate of ammonia in the exhalations. Frerichs states that he has ascertained, by chemical analysis, the existence of carbonate of ammonia in the blood in all cases in which the symptoms of uræmia are developed; but the quantity of the salt varies considerably. He further remarks that the two following propositions he has demonstrated beyond a doubt: 1st. That in every case of uræmic intoxication, a change of urea into the carbonate of ammonia takes place; 2d. That the symptoms which characterize uræmia can all be produced by the injection of carbonate of ammonia into the blood. After citing many experiments

to fortify his opinion, he says he has frequently detected the alkaline salt in the expired air of animals deprived of their kidneys, and into the veins of which he had injected urea; these animals remained quiet and awake as long as the expired air was not impregnated with the ammonia; but the moment the ammonia was observed, the various disorders of the nervous system characteristic of uræmic poisoning developed themselves.

If future observation should confirm these views of Frerichs, it will undoubtedly tend, not entirely but in part, to settle a vexed question, which has called forth the ingenuity of both the physiologist and chemist. It may, however, be that the future will reveal the existence of other poisonous materials in the blood, which to the present time has eluded observation; and, in their recognition, we may find additional causes for the production of toxæmia. It has, indeed, been suggested that in Bright's disease, the accumulation of oxalic acid in the blood will develop the symptoms of uræmic intoxication.

It is a well-known fact that profuse losses of blood and starvation, are frequently followed by intense headache, and sometimes even by mania. Whether the blood be deprived of its albumen by hemorrhage, or artificial depletion, or by the passage of this substance into the urine, the general constitutional effects of this anæmic condition of the system are more or less the same, and will develop more or less nervous disturbance, so that even without uræmia the mere deprivation of the blood of its albumen may satisfactorily account for a variety of phenomena, resulting directly or indirectly from the exercise of a morbid influence on the brain. Coma does not, I imagine, exclusively depend upon an undue afflux of blood to the brain; it sometimes ensues from a deficiency of nutritious blood, and hence its occasional development in prostration of the vital energies from disease, or excessive depletion. Nothing is more marked than the effects of exhaustion in early infants. Thousands of children die from coma, the immediate result of excessive depletion, and when the symptoms of stupor supervene, these are too often regarded as an additional motive for the continuance of the anti-phlogistic treatment. Marshall Hall, Abercrombie, and Gooch, have rendered a solid service to science, by directing attention to this practical fact, but humanity has not received a tithe of the benefit, simply because the fact has not been sufficiently heeded in the sick-room.

Physiology and chemistry are fast revealing a new basis for the treatment of disease—thought is now in the right direction, and a bright future is at hand. In less than ten years, therapeutics will have assumed a new character—the practice of medicine will be more certain, because its principles, through the investigations of the chemist and physiologist, will have become consecrated as so many unerring developments of truth.

Treatment of Uræmia.—If there be any force in the above observa-

tions, it follows as a necessary consequence, I think, that the treatment of uræmia involves two objects: 1st. The immediate restoration of the principal eliminators of the system, such as those of the kidney, skin, and bowels, with a view of diminishing through these outlets, the quantity of urea and noxious substances which may exist in the blood; 2d. The protection of the nervous centers, as far as may be, against the injurious effects of the carbonate of ammonia.

Dr. MacLagan, of Edinburgh, has recently drawn attention to the value of the *colchicum autumnale*, in uræmic poisoning. The excellence of this remedy consists in its power of increasing the amount of urea in the urine. This fact, I believe, was first discovered by Chelius, of Heidelberg. Professor Krahmer,* of Halle, has made some very interesting experiments on the subject of diuretic medicines. According to him, the average of urea secreted during the day in healthy urine, is 19.64 grammes, while the tables of Becquerel give 16 grammes. Krahmer has shown that under the influence of colchicum, the urea is increased to 22.34 grammes, and under the administration of guaiacum, to 22.74 grammes. From the experiments of Krahmer, therefore, it appears that colchicum and guaiacum produce a greater secretion of urea than any other known remedies.

Conclusions.—1st. Uræmia is a nervous disturbance arising from a peculiar blood-poisoning.

2d. Albuminuria is often connected with uræmia, but is not the cause of it.

3d. Disease of the kidney will often produce albuminuria, but in a great many cases albuminuria exists without true disease of the gland, and as a consequence of an active, or a merely passive congestion, and it will also result from a variety of nervous disturbances.

4th. If urea be a poison, the quantity of it which accumulates in the blood in cases of extirpation of the kidneys in animals, or in suppression of urine in man, is not sufficient to produce any manifest deleterious effect.

5th. According to Frerichs, uræmia is merely a poisoning by the carbonate of ammonia, which is a product from the decomposition of urea.

6th. The treatment of uræmia must consist in the free use of diuretics, sudorifics, and purgatives—the most suitable diuretics for this purpose being colchicum and guaiacum.

* British and Foreign Medico-Chirurgical Review, July, 1848, p. 250.

LECTURE XXX.

Sterility its importance.—Reproduction; how accomplished in the Female.—The female Germ, and the Spermatic Fluid of the male.—Voluptuous sensation on the part of the Female not necessary to Impregnation.—What is the true Fecundating Element in the Spermatic Fluid?—The causes of Sterility; the poor and the rich; the former increase, and the latter decrease in their families; reasons for.—Is it possible to Catheterize the Fallopian Tubes?—Dr. Tyler Smith's Operation.—Mammæ and Uterus; sympathies between.—Stricture of the Cervix Uteri a cause of Sterility.—Case successfully treated.—Retention of Urine in an Infant three Days old.—Tumefaction of the Glands of the Neck in a little Boy, aged four Years, resulting from Scarlet Fever.—What is Scarlet Fever?—Its Varieties, Causes, Diagnosis, and Treatment.—Rules to be observed during Convalescence from Scarlet Fever.

GENTLEMEN:—The subject of sterility is one of much importance, and is oftentimes the source of unhappiness to the female. It is proper, therefore, that we should examine the causes of this condition, and ascertain, if possible, the best means of removing them. Reproduction, in a physiological sense, is replete with questions of interest, and the study of its various phenomena presents a chapter which not only invites, but is worthy of profound contemplation. It is, indeed, a sort of mystery, which science has partially, but not completely penetrated. The first act in the reproductive scheme is intercourse between the sexes, and this results in what is termed fecundation. This latter consists in the imparting of life, or vitalizing the germ furnished by the female. In order that you may clearly understand the act of fecundation, you must recall to your recollection what I stated to you on this subject in my lectures on reproduction. You were then told that the generation of the human being is the joint product of the male and female, and to each of these are assigned special duties for the accomplishment of this greatest of nature's works. At each menstrual crisis, the ovaries become the center, as it were, of a sanguineous afflux, and one or more ovules are detached from the surface of these bodies—the ovules being the peculiar secretion of the ovaries, and constituting the germ, or egg, which either lives and becomes developed, or passes off with the menstrual blood as deciduous matter. The special office, therefore, of the female in the reproductive process is to furnish the ovule or egg—but this of itself would be

entirely negative in its results were it not for an influence imparted to that egg by the male.

Now, then, the question arises, What is this influence? During intercourse, when the intercourse is followed by pregnancy, the spermatie fluid, secreted by the testes, is the vivifying or life-imparting material, and the fluid reaching the ovule vitalizes it; as soon as this is accomplished the work of development proceeds, and after a stated sojourn in the uterus, which is nothing more than a lodging-place for the embryo, the foetus, through a succession of most interesting processes, becomes prepared for an external or independent existence. You see, therefore, that the duty of the female is to furnish the egg, while the office of the male is limited to the simple but important act of vitalizing it. Where does this contact between the ovule of the female and the spermatie fluid of the male take place, and in what manner is the contact accomplished? These and kindred questions have for years been propounded, but it may be said, in all truth, that they have not yet received satisfactory elucidation. One tells us that the fecundating liquor of the male passes to the ovule in a species of vapor, an *aura seminalis*; another that it becomes absorbed, and, after entering the circulatory mass, it reaches the ovule, and thus performs its special office of vitalization. These, however, are but crude hypotheses, unsupported by facts, and, therefore, in no way entitled to credit. It is maintained by some that the contact takes place in the uterus, by others that it occurs in the fallopian tube, while it is also asserted that it is on the surface of the ovary that the union is accomplished. Here, again, we are lost in uncertainty—for there is nothing positively demonstrated on the subject, except that in certain cases, such, for example, as tubal and ovarian pregnancy, it is quite evident that the contact does not occur in the uterus.

A very general opinion has prevailed that pleasurable excitement during intercourse is essential to a successful fecundation. This is an error, for it is well known that women, in whom intercourse is not only without the slightest voluptuous sensation, but even repugnant, become readily impregnated. The opinion that pleasure is necessary on the part of the female has more than once been cited in courts of justice as proof against the purity of a woman on whose person a rape, followed by impregnation, had been committed. This latter circumstance, however, is no proof at all either in favor of the consent, or adverse to the chastity of the female; and it is well for you to remember the fact, for it may be through your testimony that the scales of justice will be rightly poised, and character sustained.

But now to the question of sterility. The term sterility, in its largest acceptation, signifies an inaptitude on the part of the female to become impregnated; it must, however, be recollected that women sometimes remain barren without any special inaptitude on their part, but owing to circumstances directly connected with impotence in the husband. I

do not propose to discuss the latter question at this time, but some of the causes of male impotence may, in passing, be briefly enumerated—such, for instance, as an imperfect development, or diseased condition of the testicles, defective development of the penis, or deficiency of healthy elements in the fecundating liquor itself. It has been maintained that disproportion between the male and female organs is also a cause of non-impregnation, but this is not so, for numerous facts prove that in order that fecundation may be accomplished, it is not necessary that the spermatic fluid of the male should be thrown against the orifice of the uterus; if it be simply made to reach the external opening of the vagina, impregnation will often follow.

Among other proofs, may be cited those of pregnancy occurring in cases of a rigid and resisting hymen, which prevented the entrance of the male organ further than the very orifice of the vagina. In this latter fact there is nothing surprising, if it be remembered that the true fertilizing element of the spermatic liquor consists in what is called spermatozoa, small filamentous bodies, which enjoy the power of spontaneous motion; it is for this reason that these spermatozoa were for a long time regarded as animalculi. It seems now, however, to be shown that they are not animalculi, but partake of the character of the reproductive portions of plants, which also enjoy a spontaneous movement as soon as they have been thrown from the parent mass. With this important fact before us, it is not difficult to comprehend how impregnation may ensue when the spermatic fluid merely reaches the external opening of the vagina, for the spermatozoa, with their power of movement, can readily pass on to the ovule, and then fecundate it; and why may it not be that this is the true explanation of the contact between the female germ and the fecundating liquid of the male? Why, also, may there not exist between these an affinity which, *cæteris paribus*, always ensures contact, and, therefore, fecundation?

Let us now consider, briefly, the causes of sterility directly connected with the female herself, and I think you will find them to be as follow: 1st. Any malformation of the female organs, such as will necessarily prevent the fecundating fluid of the male from reaching the ovule; 2d. Serious disease of both ovaries, though pregnancy, simply with disease of one ovary, is not unusual; 3d. Partial or complete obliteration of the fallopian tubes, the result of inflammation; it has been shown by Mercier that this obliteration is not uncommon after the inflammatory affections which sometimes follow delivery, and he also affirms that women, from this reason, are apt to remain sterile after attacks of peritonitis, metritis, etc.; 4th. Organic diseases of the uterus, although they do not necessarily prevent impregnation, yet they undoubtedly render the liability to this condition much more probable; the same observation may be made respecting the various displacements of the uterus; 5th. All menstrual aberrations, and more especially dysmenorrhœa, may be

classed among the causes, if not of positive sterility, at least of a predisposition to it; 6th. Women who are burdened with fat, usually do not conceive; there is an interesting relation between the activity of the ovaries and an absence of excessive adipose matter, and the relation is such, that the function of these bodies is, as a general rule, impaired in women who are remarkable for an excess of fatty material; 7th. Leucorrhœal, and other morbid discharges from the uterus and vagina, may also be classed among the causes of sterility, and they may act in one of two ways, either by the changes they produce on the lining membrane of the uterus, or by causing the death of the spermatozoa, these being unable to live, even for a short period, in the morbid secretion. This latter opinion has been advanced by Donné, and I am inclined to believe he is right; he has made some interesting microscopic experiments on the subject. We do not know how long the spermatozoa remain in the vagina after being ejected from the male organ, or what length of time may elapse before they reach and fecundate the ovule, whether it be one hour or several days, so that it is not difficult to imagine how their death may ensue from even a short sojourn in a fluid full of the elements of disease; 8th. Excessive sexual intercourse is unquestionably adverse to child-birth, and this may affect the uterine organs in two ways, first by the excitement produced, and secondly by the inertia which is so apt to follow the exciting influence.

It has often been asked why the poor have more children than the rich; the fact is easily explained—the former perform laborious duty, and live frugally; the latter are inactive, and continually lapse into habits of luxury and ease. Temperance, frugality, and labor, are all calculated to increase the human family, while their opposites, stimulants, luxury and indolence, have quite the contrary effect. With these facts, it is at once obvious that the inevitable tendency of the families of the wealthy, is to become extinct, while those of the poor “increase and multiply,” and were it not for the occasional intermarriage between the opulent and the poor, this principle of extinction would be recognized in a more marked degree. A cause of sterility, which, contrary to the opinion of many writers, I am inclined to believe by no means of extreme rarity, is stricture of the neck of the uterus, and according to my experience, the stricture is most frequently met with at the internal orifice of the organ.

Dysmenorrhœa is ranked, and with good reason, among the causes of sterility—it is the congestive type of this form of menstrual aberration which most usually proves a barrier to impregnation, but it must be recollected that dysmenorrhœa is sometimes purely the result of stricture of the cervix, the narrowing being such that the menstrual blood can pass only with great difficulty, subjecting the patient to extreme suffering. I have had several marked cases of this character, and in all I have been fortunate, not only in affording relief by removing the stric-

tu., but invariably the removal of the stricture has been followed by pregnancy. The remedy consists in mechanical dilatation by means of properly graduated bougies. The dilatation involves no pain, and in judicious hands, no danger. Yet it is proper that I should caution you against the rash introduction of an instrument into the uterus—for, in more than one instance, it has been followed by death. But this, gentlemen, like all other operations, requires an intimate acquaintance with the anatomy and position of the organ, and no one who values his reputation, or cherishes a proper regard for human life, would attempt the operation without these pre-requisites. You have seen me in the Clinique introduce, on several different occasions, both the sound and bougie into the uterus, and I have elsewhere given you the necessary rules to be observed in their introduction.

While on this subject it may be as well to call your attention, for the moment, to an operation proposed some time since by Dr. Tyler Smith for the purpose of removing any obstruction that may exist in the uterine extremity of the fallopian tubes. He suggested the introduction of a uterine catheter, the extremity of which, after entering the cavity of the organ, is to be passed toward one or other of the fallopian orifices. Steadying the catheter in this position with one hand, he introduces the whalebone fiber through the catheter into the fallopian tube to the distance of an inch and a half, and, as he states, with the *greatest facility*. I have much personal respect for Dr. Smith, and entertain a high opinion of his skill. I do not mean, therefore, to doubt that he has performed this operation, which he affirms he has done on repeated occasions; but I conceive it my duty to say to you that, although in the hands of Dr. Smith, this operation has proved successful, yet in my judgment, it is a precedent not to be imitated; it is not only next to impossible to penetrate the tube in the living subject, but the very attempt is full of peril to the patient. You may form a correct idea of the difficulty by opening the cavity of the uterus, and endeavoring with all the advantage of inspection, to penetrate either fallopian orifice even with a bristle. In one word, I can not regard the suggestion in any other light than as one of those transcendental refinements with which, for the benefit of the patient, and the tranquillity of the practitioner, it is at least prudent to dispense.

The general directions for the management of sterility are few and simple. In each case which may present itself to your observation, the first inquiry should be—What is the peculiar cause? If this can be recognized, the next point to be decided is—Is it within the control of remedies? Should you ascertain the existence of dysmenorrhœa, it then becomes an essential question—What is the character of the dysmenorrhœa? Is it the congestive type, is it the result of ovaritis, is it due to extreme nervous irritability, or to stricture of the cervix uteri? Suppose, for example, in another case, the female should be troubled

with a morbid vaginal discharge. Then the question to be determined is—Does this discharge proceed from the uterus, or is it limited to the vagina; is it idiopathic or symptomatic, etc.? If in another case, you should detect organic disease of the uterus, the question naturally presents itself—Is the disease beyond treatment, or is it under the control of remedial agents? Suppose, for example, you have a patient who has never conceived, and who for years has been troubled more or less with a profuse discharge of blood from the vagina. In this case, before attempting relief, it is essential that you should know precisely to what the loss is due. Is it from serious organic lesion, polypus, fibrous tumor, etc., or is it simply a case of menorrhagia? If this latter, is it the menorrhagia of plethora, or is it the atonic or passive form?

These, you perceive, are so many fundamental questions to be determined before proceeding to treatment. We have on various occasions discussed very freely the best means of removing the above causes when they exist, and it is, therefore, not necessary to recur again to them, at this time. Marshall Hall, basing his opinion on the well-known sympathy between the mammæ and uterus, suggests in two opposite conditions of the uterus, viz.: In an atonic and congestive state, the application of an infant to the breast for a week before and during the catamenial period, and he maintains that this will oftentimes prove an effectual remedy for sterility. We know very well that women, about the advent of the menstrual flow, suffer more or less from engorgement of the mammæ; and it is also proved that the application of the child to the breast in a young woman will frequently determine a secretion of milk. Predicating, therefore, his suggestion on these facts, Marshall Hall argues that when sterility is traceable to a congested condition of the uterus, an efficient mode of removing the congestion is derivation to the breasts by the suction of the infant; and again when sterility is due to an atonic or flaccid state of the uterus, the application of the infant to the mammæ, through the reflex action it produces, secures a contraction of the uterus, and in this way removes the flaccidity of the organ.

These suggestions are not without force; they are founded upon a truthful physiology, and one worthy of consideration. Upon this same principle, authors have recommended, as a means of preventing uterine hemorrhage after the birth of the child, the immediate application of an infant to the breast. This is a favorite practice of Rigby. There can be no objection to it in cases of moderate bleeding; but when the flow is such as to endanger life, more prompt and energetic measures must be adopted, such as we have spoken of in former Cliniques. The following I may cite as an interesting case of sterility, which came under my professional care in March, 1852, and which so completely yielded to treatment that, in May, 1854, the lady was delivered of a healthy and vigorous son:

Mrs. W., aged thirty-one years, married fourteen years, had always enjoyed good health except during her menstrual turns, when she was uniformly compelled to keep her bed until the catamenial period had passed over, such was the intensity of her suffering. This lady was a native and resident of Ohio, and consulted me through the advice of Dr. Winslow, who had not been her medical attendant, but who had become much interested in her case through family connection. I first saw her in March, 1852, and after a very careful examination, I formed the opinion that her sufferings during the menstrual crisis were altogether due to a stricture of the neck of the uterus, this giving rise to the peculiar form of dysmenorrhœa to which I have already alluded. This lady was most anxious to have offspring; she was surrounded by all the comforts that wealth could bring her, and it seemed that the consummation of her own happiness and that of her husband depended on the birth of a child, which might inherit the name, and supply the only vacancy in their earthly bliss.

I told her very confidently that, in my opinion, the cause of her sterility was altogether a *mechanical one*, and that, with its removal, I could see no reason why she should not bear children. She consented to abide by my advice, and on the 27th day of March I commenced my treatment, which consisted exclusively in dilating the cervix uteri by means of graduated bougies. At first, I had much difficulty in introducing the smallest size instrument. The necessary dilatation, or, in other words, the complete removal of the stricture was accomplished after the introduction of the bougie *ten times*, at an interval of from five to seven days. The pain, which had previously accompanied each menstrual evacuation had entirely subsided; and on the 10th of the following July, the lady left the city, for her home in Ohio. On the 15th day of May, 1854, she was delivered of a son, being about fourteen months from the time she had first applied to me for advice. This case is interesting in more than one particular, and should point out to you the necessity of a full and proper survey of the circumstances as they exist before giving an opinion as to the possibility or impossibility of removing a condition so full of unhappiness to the female as that of sterility.

RETENTION OF URINE IN AN INFANT, THREE DAYS OLD.* Joseph A., aged three days, is brought to the Clinique by his mother, who says she merely came to return thanks for the restoration of her child. "Is that the little sufferer brought here some three weeks since by your friend?" "Yes, indeed, it is the same, sir; and he is now quite well." Do you remember this infant, gentlemen? He is the little fellow who was brought here when he was only three days old. Your note-books will remind you of all the circumstances connected with his case. He had not, you will recollect, passed his water since his birth; he was extremely

* Page 438.

restless, refused the breast, and was constantly moaning. The old woman who came with him here said he had taken parsley-tea, sweet spirits of nitre, etc., but, to use her own language, "these remedies did it no good." This was a case of retention, and not of suppression of the urine. To the important difference between these two affections, and the absolute necessity of a just distinction, your attention was emphatically directed. I remarked to you at the time, that the administration of diuretics to this infant was not only bad practice, based on the wildest ignorance, or the most scandalous carelessness, but that it was calculated, by increasing the secretion of urine, to aggravate its sufferings, and add greatly to the danger of death. I introduced before you a small catheter into the bladder, and drew off four ounces of urine. The child was then ordered to be taken home, to be put into a warm bath, and have 3j of castor oil given it. One of my staff (Dr. Garvin) was intrusted with the future management of the case, and, if necessary, requested again to introduce the catheter. This, he informs me, was not needed, as the infant experienced no further difficulty.

TUMEFACATION OF THE GLANDS OF THE NECK IN A LITTLE BOY, AGED FOUR YEARS, RESULTING FROM SCARLET FEVER—WHAT IS SCARLET FEVER?—ITS VARIETIES, CAUSES, DIAGNOSIS, AND TREATMENT—RULES TO BE OBSERVED DURING CONVALESCENCE FROM SCARLET FEVER.—James L., aged four years, is suffering from a swelling in the glands of his neck. "How long, my good woman, has your child had these swellings?" "Ever since he recovered from the scarlet fever, sir." "How do you know he had the scarlet fever?" "Why, sir, he was all red, like a lobster, and he had a sore throat, which nearly killed him." "Well, my good woman, that is not a bad description of scarlet fever. How long was he sick with the disease?" "He was very ill, sir, for ten weeks, but he has been pretty well for the last month, with the exception of these lumps, which give him a good deal of pain."

The little boy before you, gentlemen, presents one of the not unusual results of the disease with which he has been affected. I have before directed your attention to the sequelæ of scarlet fever, and you will recollect that they sometimes present themselves in the form of dropsy, anasarca, tumefaction of the cervical glands, enlarged tonsils, deafness, etc. The case of this little patient will afford me an opportunity of making some general remarks on an affection which may be said to be the terror of parents, and sometimes, from its rebellious character and sudden fatality, deeply humiliating to the practitioner.

Scarlet fever may present itself in one of three forms, and hence its division into simplex, anginosa, and maligna. In the first, the simplex, the disease assumes its mildest character, and scarcely needs medication. The cutaneous surface of the body presents a slight blush, a mere erythema, with comparatively little constitutional disturbance, and in a few

days the disease passes off, requiring little more than confinement to the house, and an occasional aperient, together with simple diet. The second variety, the *scarlatina anginosa*, is characterized by more or less febrile excitement, a deeper blush of the integuments, exhibiting the appearance of a boiled lobster, and especially sore throat, which oftentimes constitutes the important, if not the perilous feature of the affection. The *scarlatina maligna* is that form which is most destructive to life. A child, previously in good health, attacked with this virulent variety of the disease, will sometimes be a corpse in two hours after the inception of the malady.

Scarlet fever, like other eruptive diseases, consists essentially in a poison, but what that poison is, or what the circumstances are which modify it, so that at one time it is marked by comparative mildness, and at another assumes such virulence as to destroy life in one or two hours, is, as yet, a matter about which we may speculate, but nothing more. The true nature of the poison is concealed from us, and all we know positively is, that when full and undiluted, it constitutes not only a deadly shaft, but one of the most unerring and prompt in its effects to which human life is exposed. It is the *scarlatina maligna* in which this poison becomes so concentrated as suddenly to depress, through its effects on the nervous system, the vital forces, that has generated in the public mind such apprehension when the disease prevails as an epidemic. I have known parents to become almost maniacal upon this subject, losing all self-control, closing their houses, and rushing to the country in the hope of saving their children from the touch of this fatal upas.

This is all wrong. Scarlet fever is one of the diseases incident to childhood, and, except in its malignant form, it can not be considered, if properly treated, one of great danger. I see but little philosophy in attempting to avoid it by change of place, unless some unearthly and all-wise spirit should point out the very locality which, *par excellence*, enjoys an immunity from its approach. Where, under the afflicting dispensations of Providence in the way of disease, is a parent so likely to have her child properly cared for, as at her own home, with all the comforts of her own fireside, and the devoted attention of her own faithful and well-tried physician, to whom in the hour of danger she has been accustomed to look, and not in vain, for both consolation and safety!

I have just told you that scarlet fever is one of the ordinary affections of childhood—but it will sometimes attack the adult. It is a curious and interesting fact, in a professional sense, that this disease occasionally develops itself in the lying-in woman, and, under these circumstances, it is generally fatal, exhibiting in full force all the marked characters of the poison. Why is this? May it be because in the puerperal woman the vital forces have become measurably depressed by the process of child-birth, and that, therefore, the poison of scarlet fever meets with so much less resistance than it would encounter in good health? This hy-

pothesis is inconsistent, however, with what we know to occur when the disease in its most malignant form attacks the child, viz., that children in exuberant health, under the invasion of the malignant form of scarlet fever, die in two or three hours from the time of attack. I am rather inclined to the opinion that the disease is usually fatal in the puerperal woman, for the reason that the natural processes of child-birth, viz., the milk secretion, and the lochial discharge, are more or less interfered with, that is, they become arrested under the invasion of the scarlet fever, and these secretions being locked up in the economy, become additional disturbing agents of the nervous system.

It would seem from the researches of Guersant and Blache, that scarlet fever is the least frequent of what may be properly termed the eruptive fevers; of four hundred and twenty-seven of these latter cases collected by them, two hundred and thirteen were varioloid or small-pox, two hundred and sixty-seven measles, and only one hundred and fifty-seven scarlatina. This disease is both sporadic and epidemic, and it is now conceded that it spreads frightfully through contagion. It may, indeed, be called fitful, both in its advent, progress, and fatality. In some seasons, without any ostensible cause, it prevails to an alarming extent, and is severely fatal; at other times, on the contrary, its fatality is comparatively slight. I do not know but what in some respects this affection is to a certain extent entitled to be termed periodical, for observation proves that we often pass several seasons with but a trifling visitation of the malady, while, again, at certain periods, at an interval of from three to five years, it breaks forth with full violence, and from its fatality infuses general terror into the popular mind. Such I have known to be the case in the city of New York, and such, too, is in accordance with facts as noted in other places.

Scarlet fever is often complicated with other affections, and it rarely happens in severe attacks of this disease that the brain, thoracic and abdominal viscera are not more or less complicated. Sometimes, also, it supervenes during the progress of other maladies, and in such case it has been called by Rilliet secondary scarlatina. The disease with which scarlet fever is most likely to be confounded is measles, but ordinary care will enable the practitioner to avoid all error of diagnosis between the two affections. In measles, the precursory symptoms are peculiar, such, for example, as sneezing, weeping of the eyes, coryza or a discharge of mucus from the nose, an absence of serious inflammation of the throat which is always the accompaniment of the anginose and malignant forms of scarlet fever; the eruption in measles usually presents itself not until the fourth day after the premonitory symptoms, while in scarlet fever it appears on the second day of the febrile symptoms. The eruption, although it appears earlier, continues for a longer period than in the measles; in the latter affection it passes off generally about the eighth day after its appearance, while in scarlatina it continues from the

tenth to the fifteenth day, but there are exceptions to this, for in some cases it will disappear before the tenth day, and occasionally the disease will be present without the slightest sign of eruption.

Another important distinction between the two affections is in the character of the eruption itself. The efflorescence of scarlatina, if closely observed, consists of numerous small points spread out in patches of various forms and size, presenting the aspect of a diffused scarlet surface. In rubeola, on the contrary, the eruption is made up of irregular patches, with an elevated surface, the spots being less red at their circumference than in the center, and what is particularly observable are the spaces between the spots, in which the skin presents its natural pale color. There is a marked difference in the two affections in regard to the after effects. In scarlet fever, we look for dropsy, either of the chest, abdomen, or anasarca, more or less derangement of the glandular system, etc., while in measles, the pulmonary organs are extremely apt to become affected, giving rise to bronchitis, pneumonia, etc. Indeed, as a general principle, it may, I think, be conceded that the true danger of measles is not in the disease itself, but in some of its sequelæ, more especially the pneumonia, which often assumes a formidable type. Convulsions will sometimes present themselves as a complication of scarlet fever, and this is very apt to occur when the efflorescence is either partially developed or, after having appeared, suddenly recedes; you can have no difficulty in understanding why, under these circumstances, the convulsive movement should ensue. Nature is contravened in her attempt to throw upon the surface the poison, which constitutes the essence of the disease; this poison as a consequence accumulates in the blood, becomes an irritant of the spinal cord, and hence the convulsions. The only safety to the patient in such case is recourse to prompt and effective measures to determine to the surface, and thus aid in the full development of the eruption. This remark applies not only to scarlet fever, but also to measles, small-pox, etc.

The symptoms of scarlatina are not always the same; they change according to the variety of the disease, and become modified, also, by other influences, such as the virulence of the epidemic, the season of the year, individual idiosyncrasy, etc. In scarlatina simplex, there is usually headache, rigors, nausea and vomiting, with more or less febrile excitement, and these symptoms, ordinarily in two days, sometimes earlier, are followed by an efflorescence. The pulse in scarlet fever is characterized by extraordinary rapidity; and it is asserted by Trousseau, that he has known the pulse of the adult in this disease to range at one hundred and sixty per minute. In the anginose variety, all these symptoms become aggravated, and in addition there is more or less stiffness about the jaws, painful deglutition, and sore throat, which, as I have already remarked, is characteristic of this form of the malady. In scarlatina maligna, all the above symptoms again undergo an aggravation, and a prominent feature of this variety is great depression of the vital forces, with a strong ten-

dency, in many cases, to sinking. The tongue at first is partially covered in the center with a whitish paste, but its extremity and borders are red even from the commencement, and this scarlet redness in a day or two pervades the entire tongue, and continues even after the efflorescence has disappeared. The red tongue is peculiar to all the varieties of the disease. In the anginose and malignant forms, the fauces, mouth, and nose are more or less filled with an offensive secretion, and both respiration and deglutition are rendered difficult. I might, indeed, enter into a more minute detail of the symptoms, but sufficient, I apprehend, has been said to enable you, without hesitation, to recognize the disease in all its varieties when it exists.

Let us now proceed to a most important consideration, viz., the treatment, for, after all, this is the material part of the whole subject. You will find much difference of opinion with regard to the therapeutic management of scarlet fever; and I regret to believe that prejudice has sometimes sadly interposed between judgment and duty. I have heard practitioners affirm in the most emphatic manner that under no circumstances would they abstract blood in this disease; while others, on the opposite extreme, declare that the sheet-anchor of hope in this affection is the lancet. There is, gentlemen, more temerity than good sense in either of these absolute opinions, and you will find nothing in either of them to call for your acquiescence. Bleeding in scarlet fever, like bleeding in any other disease, is good and it is evil—good when indicated by the surrounding circumstances of the case, bad when these justifying circumstances are absent. I shall now briefly tell you the treatment to which I usually have recourse, and which, I am happy to say, has proved highly successful. When called to a case of scarlatina, my first object is to ascertain its variety; if it be the mild or scarlatina simplex, unless, as sometimes happens, unusual symptoms should develop themselves, I enjoin upon the patient, quiet in the chamber, administer a gentle aperient, and restrict him to an antiphlogistic diet; should there be much heat of surface, I have the entire body four or five times during the day freely sponged with cold water, or vinegar and water. This sponging will be found not only grateful, but very efficient in diminishing the unnatural heat of the system. There is usually in scarlatina an annoying sensation of burning in the skin, of which the patient is apt to complain; nothing will cause this so rapidly to subside as the cold affusion or sponging, and the pulse also, under its influence, becomes lowered, and the patient falls into a refreshing sleep.

The cold affusion was first introduced to the attention of the profession by Dr. Currie; and oftentimes is of signal value in this disease. In France it is employed with great benefit in the most unpromising cases of scarlet fever, such, for instance, as when delirium, coma, subsultus tendinum, etc., supervene. The mode of using the cold affusion is as follows: Let the child be placed naked in a tub, and then let cold water

be poured on the head and entire body for twenty seconds; the child should afterward be wrapped up in a soft quilt, and put to bed. This may be repeated every four or five hours, according to the urgency of the symptoms. Those of you who have not witnessed the effects of the cold affusion in scarlet fever, can scarcely appreciate its magic influence in the general mitigation of the distressing symptoms; and though *a priori* you might judge the contrary to be the result, yet the eruption under its operation assumes a brighter color.

In all the varieties of this affection, acidulated drinks will be beneficial; lemonade, currant-jelly water, barley-water, with a few drops of muriatic acid, tamarind-water, etc. The following combination is a good one, and may be administered in any of the forms of the disease:

R	Acid Muriatic, dilut.	.	.	.	.	.	.	3 j
	Syrup Aurantii	.	.	.	.	.	.	$\frac{3}{4}$ ss
	Aquæ	.	.	.	.	.	.	$\frac{3}{4}$ viij M.

A table-spoonful several times during the day.

Now for the anginose form; in this case, if there be a full pulse, and much tumefaction of the sub-maxillary and sub-lingual glands, together with active febrile excitement, I do not hesitate to apply from two to four leeches to the throat, depending upon the age of the patient; the leeching, I am sure, in these cases, is of essential benefit; it not only diminishes the local congestion setting toward the throat, but it discharges a very acceptable and necessary office in protecting the brain from engorgement and subsequent effusion. Children, I am confident, often die in this disease from effusion on the brain. When death ensues in scarlatina, how often do we notice it preceded by coma. What is this coma? Sometimes, I admit, it may be the result of the poisoned blood on the cerebral mass, and this is not unusual in the malignant form; but, again, it sometimes is the effect of effusion. It would be an interesting fact to know the relative proportion of deaths from effusion on the brain in scarlet fever. The leeching must be renewed according to the circumstances of the case; and these circumstances are to be determined by the discretion of the practitioner. But in this connection remember two facts. 1st. Blood-letting in acute diseases, to be efficacious, must be prompt. 2d. The child has not the same ability to sustain the abstraction of blood as is possessed by the adult. Allow me here to give you a caution in the use of leeches in scarlatina; the cutaneous circulation is extremely active in this disease, and, perhaps, in no other malady will the bleeding be so profuse under the application of leeches. Therefore, for this reason, you must exercise much judgment as to the number of leeches to be applied, and watch carefully, especially in very young children, that the bleeding is not carried too far. Many children are sacrificed from carelessness on this point.

In addition to the blood-letting, a brisk cathartic should be administered, say ij grains of calomel, iv of Jalap, and one sixth of antimonial

powder; and in six hours afterward a table-spoonful of the following draught may be given every hour until free purgation is produced:

R	Sulphat. Magnesiae	3j
	Infus. Sennae	℥iij
	Mannae	3 ss M.

The bowels should subsequently be kept in a soluble state, either by enemata of molasses, oil, and soap-suds, or simply warm water, as may be indicated. I have found much benefit, especially when there is determination to the head, in the use of two tea-spoonful of table salt in ℥iv of tepid water thrown up the rectum. It proves, in these cases, a capital revulsive on the intestinal mucous surface of the lower bowel, and is worthy of being remembered. Small doses of calomel occasionally, say one grain, should the bowels not properly respond to the above remedies, will be of special service. I have great faith in the judicious use of this medicine in scarlet fever.

The throat, both in the malignant and aginose forms of this disease, will require local applications; in most cases, detergent gargles are all that will be required, and these may consist of alum and barley-water, a few drops of muriatic acid and barley-water. The following, known as Labarraque's solution, is in good favor, and may be used with great benefit in these cases: Solution of the chloride of soda, 3 xij; water, ℥vss; honey, 3 iv. This is a gargle highly recommended by Dr. A. T. Thompson, and is one of much value. Equal parts of lemon-juice and honey, is also a good combination. The ulcers in the throat are usually marked by great sluggishness, and require the stimulus of some of the above applications. But how are these to be made? It is almost impossible to prevail on the child to use them as gargles. The best plan is to open the mouth with a spatula, and then with a small piece of sponge, saturated with whatever material may be selected, the ulcers should be freely touched three or four times a day as may be necessary. Occasionally, it will be found useful to throw some of these remedies into the nose, and this may be done without difficulty by means of an India-rubber bag, with a small ivory pipe. This process of syringing the nostrils is valuable on two accounts; it not only removes the morbid secretions which collect there, and consequently impede respiration, but it also tends to cleanse the ulcers in the throat. Sometimes a membrane forms in the throat, the result of the inflammatory action, and this has been called the *angina membranacea*. When this exists, it will be necessary to change the inflammatory action by the application of the nitrate of silver, either in solution or in the solid stick; if the former, ℥j of the nitrate to ℥j of water; the throat may be freely touched with this latter by means of a camel's hair pencil.

I have not spoken of emetics, though we have high authority for their administration in this disease. They were much resorted to by Dr. Rush, and he was in the habit of combining calomel with them in order that a

purgative effect might also be insured. There can be no doubt of the value of emetics in certain conditions of this affection; for example, at the very onset, when the eruption is tardy in its development, and the system becomes oppressed as a consequence, what can act more efficiently than an emetic? It seems to give a new impulse to the sluggish forces, and by its determination to the skin, produces what is most desired, a fully developed eruption. Again, when the throat is more or less filled up by the morbid secretions, vomiting will be attended by the happiest results; it removes the secretions, and cleanses the throat. A combination of ipecacuanha and tartar emetic will prove efficient for either of the above purposes:

℞	Pulv. Ipecac.	.	.	.	.	.	.	gr. iv
	Emet. Tart.	.	.	.	.	.	.	gr. $\frac{1}{4}$ M.

The above may be given in two table-spoonsful of tepid water to a child from two to three years of age.

In the malignant form of scarlatina, when the system becomes suddenly oppressed by the poison of the disease, and there is every indication of sinking, what is to be done? These are the cases of desperate hope; they oftentimes defy science, and resist every effort to arrest the work of death. The only indication is, as far as may be, to fortify the system by the prompt employment of wine, quinine, ammonia, etc. Dr. Watson speaks highly, in this typhoid condition of the system, of a solution of the chlorate of potash. He puts 3j of the potash into a pint of water, and this is to be given during the day as a drink. In the management of scarlet fever, there is one element so essential to success that it never must be lost sight of—I mean ventilation. And why so? For the simple reason, that the disease consists in a poison, and the want of fresh air will only tend to the concentration of this poison, and consequently the defeat of the best directed treatment. The air of the chamber should be constantly purified, and nothing will do this so effectually as the introduction of atmospheric air from without. Let the window and door be opened several times during the day; you need have no apprehension of the patient taking cold—fresh air will harm no one—the only precaution to be observed is not to allow the invalid to be exposed to a draft. Tubs of hot water placed in the room are good purifiers, but nothing is so effectual as a healthy atmosphere from without.

One word, gentlemen, as to the alleged prophylactic properties of belladonna in scarlet fever. The idea was first suggested by Hahnemann, predicated upon the basis of the homœopathic school "*similia similibus curantur*." Hahnemann observed that the administration of this narcotic is often followed by dry tongue, more or less tumefaction of the glands of the throat, a sort of miliary eruption, etc., and hence, consistently with his theory, "like cures like," he strongly advocated the administration of belladonna as a preventive remedy; he also claimed for it the merit of

mitigating the severity of the symptoms, even when it failed in preventing the appearance of the disease. Respecting the efficacy of this medicine, there is great variety of opinion; I have employed it with a view of its prophylactic virtues, but I must confess without any marked success. Practitioners are very much divided with regard to this question; and some extraordinary statistical tables have been recorded by Dr. Stievenart, of Valenciennes, which, if they be really accurate, go far to establish the virtues of this drug. The circumstances under which Dr. Stievenart was induced to have recourse to the belladonna, were these: An epidemic of scarlet fever had prevailed, marked by a sad fatality; thirty had died out of ninety-six attacked. In a village in which this epidemic displayed itself, of two hundred and fifty persons, two hundred took the belladonna, all of whom escaped the disease. He gave the medicine, both in solution and powder. Two grains of the alcoholic extract of belladonna were dissolved in $\mathfrak{z}\text{j}$ of water, or aromatic infusion; of this two drops were ordered for a child one year old daily, for a period of nine or ten days, and for every additional year one drop was added to the dose. If the powder were used, one half a grain of the pulverized root mixed with sugar, was divided into ten papers, one of which was given twice a day to children from one to two years of age, four powders to children from three to five years of age, etc. There can be no objection to the use of belladonna in alarming epidemics; as a prophylactic remedy, it may do good; it can not, in the above doses, do harm. But when the disease appears, my advice is to let the narcotic alone, and have recourse to less doubtful remedies, to which we have already alluded.

I can not too earnestly enjoin upon you the necessity of careful vigilance during the time of convalescence from scarlet fever; many of the formidable sequelæ of this affection, I am confident, originate at this period, not necessarily so, but from some indiscretion on the part of the patient. Cold and over-feeding are two of the prominent exciting causes of these sequelæ; therefore, let every caution be observed in reference to these two points.

LECTURE XXXI.

Nausea and Vomiting in Pregnancy.—Modifications of the Uterine Organs under the Influence of Gestation.—Membrana Decidua and Reflexa.—Is it ever justifiable to produce Abortion in the Vomiting of Pregnancy?—Idiopathic and Symptomatic Vomiting; how Distinguished.—Is the Vomiting of Pregnancy Conservative, or otherwise?—Connection between an absence of Vomiting during Gestation, and Miscarriage.—Miscarriage, how prevented.—Treatment of Nausea and Vomiting.—Vaginal-Rectocele in a married Woman aged thirty-six Years.—Varieties of Vaginal Hernia.—Excessive pain in the left Mamma in a young girl eighteen Years of age.—Mastodynia Neuralgica.—Irritable Tumor; Pudental Hernia in the right Labium Externum in a married Woman aged forty-two Years.—Spasm of the Vagina in a married Woman aged twenty-two Years.—The difference between Spasm and Neuralgia of the Vagina.

GENTLEMEN :—You will occasionally meet in practice with cases of excessive vomiting connected with pregnancy, and you will sometimes, too, find such cases rebellious to every medicine which sound judgment can suggest. Allow me, therefore, to call your attention to a few general considerations touching the gastric irritability usually consequent upon gestation. You are aware that nausea and vomiting may be either idiopathic or symptomatic—that is, they may proceed from primary disease of the stomach, or they may be simply the results of a disturbing influence in some remote organ. The vomiting of pregnancy properly belongs to this latter class, and it is, therefore, always enumerated as one of the ordinary symptoms of gestation. The uterus, under the numerous modifications produced in its tissues by impregnation, displays various sympathies with distant portions of the economy—hence enlargement of the breasts, head-ache, depraved appetite, nausea and vomiting, constipation, etc., etc., are among the usual accompaniments of this condition, and are unequivocally but so many indications of the remarkable changes going on in the uterine organs. It appears to me that the true explanation of these phenomena, and their direct and almost necessary connection with pregnancy, are questions about which there should not be much doubt. These sympathetic influences, it will be conceded, are conveyed through the ganglionic system of nerves,* and to understand

* M. Negrier of Angers has recently suggested that the cause of vomiting in pregnancy is owing to an inflammatory condition of the neck of the uterus, and hence, with this hypothesis, he suggests the application of leeches to the cervix as the most efficient remedy. I do not pretend to deny that, under some circumstances, the

why these nerves should be so modified by pregnancy as to induce impressions, not belonging to the ordinary phenomena of life, it is only necessary, it seems to me, to compare the uterus in a state of gestation* with that organ in its unimpregnated condition, and free from all the disturbing influences of organic or functional derangement.†

Fecundation,‡ I have told you, consists in the vivification, through the spermatic fluid of the male, of the egg or ovule secreted by the ovary of the female, and as soon as this act of imparting life to the ovule is consummated, the internal surface of the uterus becomes the seat of an extraordinary congestion—this surface presenting, as it were, the aspect of a blaze of fire, and as a consequence of this determination of blood there is poured out on the cavity of the organ a coagulable lymph, not unlike what occurs on the internal surface of the larynx in a severe attack of croup, except that, in the latter case, the exudation is a pathological result, while, in the former, it is simply one of the processes instituted by nature to enable her to carry out in completion that interesting and wonderful work—reproduction. This coagulable lymph, which lines the cavity of the uterus, assumes the shape of the organ, and forms a closed sac, and this sac, the product of an extraordinary congestion, is what is known as the *membrana decidua*, or *membrana caduca*.

There are three openings in the uterus—one is represented by the os

cervix uteri may become the seat of inflammation during gestation—but to say that this is the uniform rule would be at once to declare that pregnancy is essentially a pathological condition, and this certainly can not be said with truth.

* Page 136.

† It is one of the fundamental principles in uterine pathology, never to be lost sight of, that the various sympathies which the uterus is capable of evoking in a state of pregnancy, are oftentimes brought into active operation when gestation does not exist; these sympathies being called into display in consequence of disease of the uterine organs, whether functional or organic. In amenorrhœa, dysmenorrhœa, etc., how often will you observe the patient to complain of sick stomach, palpitation of the heart, head-ache, fullness of the breasts, etc., not to speak of the numerous fugitive pains, partaking oftentimes of a neuralgic character, in various portions of the system, sometimes in the side, at others in the back or limbs. Again in carcinoma of the uterus, one of the most distressing symptoms is frequently excessive gastric disturbance. Attention has been directed so often to these points in the clinic, when speaking of the diagnosis and treatment of affections of the uterine organs, that it can not be necessary to allude more particularly to them at this time.

It may, however, not be out of place to state that intercostal neuralgia is far more frequent in the female than in the male, and it is alleged that its most fruitful causes in the former are anæmia and hysteria. It assumes numerous types, and sometimes great judgment is necessary to distinguish its true character. It is not unusual, in an aggravated attack of intercostal neuralgia, for the patient to complain of increased pain while coughing, or at the time of a full inspiration, thus causing the unguarded practitioner to imagine that there is inflammation of some of the respiratory organs. The diagnosis is simple—the respiration is natural, no excitement of pulse, and pressure usually palliates the pain.

‡ Page 535.

uteri, and the other two by the lateral and superior angles, which are continuous with the fallopian tubes. You see, therefore, that, after the formation of the *membrana decidua*, representing as it does an imperforate sac, nothing can enter the uterus, except it penetrate the sac or push it forward.

The *membrana decidua*, it must be recollected, is formed before the germ passes into the uterus, so that, when the impregnated ovule, brought by the successive contractions of the fallopian tube to one or other of the superior and lateral angles of the organ, enters the cavity of the uterus, it is not by perforating the sac, but by pushing it before it, and the portion thus pushed forward is the *membrana reflexa*. So you see, gentlemen, the first change which occurs in the uterus prior to the entrance of the germ is an extraordinary congestion, resulting in the formation of the *membrana decidua*, while the *membrana reflexa* has no existence until the fecundated ovule has found its way into the organ. But as soon as the germ has reached its place of sojourn—for the uterus is merely a temporary domicile to be occupied by the embryo until sufficiently developed for an external or independent existence—the organ still continues to be the center of an afflux of fluids, necessary in the first place for the formation of the placenta, and secondly for the continued nutrition and development of the fœtus. In this way, I might proceed to show you the successive increase in the various structures of the uterus, how their growths are the result of new formations, etc.—these questions, however, I have already fully discussed in my lectures on midwifery.

Sufficient, I think, has been said to show you that the uterine organs, at the very earliest period of impregnation, are thrown, if I may so speak, into extraordinary commotion; not only are there notable modifications in their anatomical structure, but there are, also, most remarkable and important changes in their physiological functions. I can not too earnestly impress upon you the fact—that the *physiology of the impregnated uterus is not the physiology of the unimpregnated organ in a state of health*. In pregnancy, as a general rule, one of the most interesting physiological offices of the uterus and its annexæ ceases—I mean menstruation. And we find as a substitute for this monthly disgorgement an extraordinary increase of fluids setting toward these organs. We need proceed no further to be satisfied of the complete change effected in the uterus and its appendages, under the influence of gestation; nor, with these facts in view, can we encounter much difficulty in understanding the various sympathies evoked in the economy.

One of the first of these sympathies is disturbance of the stomach, as is shown by the nausea and vomiting, which are usually such uniform accompaniments of pregnancy. You will observe in practice great differences as regards the particular period at which these symptoms manifest themselves for the first time after impregnation, and also as regards their duration and intensity. Some women are nauseated almost simul-

taneously with the act of fecundation, others again complain of no disturbance of the stomach for two or three months after impregnation. But I think you will find, as a general rule, that nausea and vomiting occur during the first month of gestation, and continue with more or less annoyance to the patient until the expiration of the fourth or fourth and a half month, when they gradually begin to subside. Again, in some instances, the vomiting will reach a fearful point, causing great emaciation and debility, thus placing the lives of both mother and child in serious peril, the former from the exhaustion superinduced, or the rupture of some important organ, the latter from the danger of premature expulsion. There is no difficulty in accounting for the shades of difference in these symptoms—they are due to the differences observed in individual organization, temperament, and also to idiosyncrasy. Variations in the effect of like causes on the human constitution, can not be too closely analyzed by the practitioner; oftentimes they are the surest guides to the correct application of remedies, and to omit a due consideration of them is frequently to deprive the patient of an element essential to the successful treatment of disease.

The subject of excessive vomiting in pregnancy, involving the safety of the mother, has recently attracted much attention, and, in 1852, there was a remarkable discussion in the French Academy of Medicine, embracing more especially the question—Is it ever justifiable to induce abortion in cases of excessive vomiting? The discussion grew out of a report made to the Academy by Cazeaux, and there was much conflict of opinion on the subject, the ultimate decision being one of a mixed character.

There is no doubt that pregnant women have succumbed from the effects of vomiting—there are some striking instances recorded, and I am sure the unrecorded experience of practitioners could furnish many more examples. Without entering into a prolix discussion of the question whether abortion is ever justifiable in these cases, it seems to me to be more a question of sound judgment than one of controversy; and in this case, as in all others in which doubts may arise as to the proper course to be pursued in the treatment of disease, it is the duty of the medical man to fortify himself in every possible way by an appeal to judicious and experienced counsel, and by a careful and thorough review of all the surrounding circumstances of each individual case. In this way, with no preconceived theory to sustain, with no prejudice to cloud his judgment, no false light to lead him into error, the sound physician will, I think, be enabled, under circumstances like these, to arrive at a just decision; and, at all events, whatever he may do, under the influence of such antecedents, will have been done with good and justifiable intent, and, therefore, will deserve, and must receive the sanction of all good men. I can not for myself recognize any difference between the decision of this question and multitudes of others that are more or less constantly presenting themselves to the practitioner, while engaged in his daily

rounds of duty. Where is the physician who has not, at times, been almost bewildered in his desire to decide the nice question, *further depletion or stimulation*, in a case, for example, of pneumonia, pleurisy, or typhus, knowing, at the same time, that on the correctness of his decision must depend the life of the patient! In a case like this, after the proper exercise of his honest judgment, looking merely at the safety of his patient, whatever that judgment may indicate, and whatever the issue may be, I hold that the medical man has performed his duty. So, gentlemen, is it in symptomatic vomiting, endangering, if not checked, the safety of the mother. Look carefully at all the circumstances, and if, with the aid of additional counsel, you should be impressed with the conviction that the greatest, if not the only safety of your patient is in premature delivery, then, in my opinion, you would deserve rebuke if you withheld this means of relief, for, after all, the question which you are to determine is the simple but grave one, of life or death,* and the decision has nothing to rest upon but human judgment.†

Is it possible to confound the vomiting of pregnancy with idiopathic vomiting? Under ordinary circumstances, nothing is easier than to distinguish between these two forms of gastric disturbance. The vomiting consequent upon gestation usually occurs at stated intervals; as soon as the stomach is relieved, the patient is cheerful and well; there is no fever, nor any other indication of ill-health. In idiopathic vomiting, on the contrary, there will be, to a greater or less extent, the usual accompaniments of disease. When it is remembered that almost every pregnant woman, during a period of her gestation, suffers more or less from vomiting, and that this is one of the most uniform attend-

* Page 45.

† The two chief arguments employed by those who oppose the induction of premature delivery, are: 1. That, in some instances, women who have been supposed to be almost in a moribund state from the exhaustion of vomiting, have recovered and brought forth living children. 2. That the physician is not justified in the performance of an operation, which necessarily leads to the death of the child. I do not see much force in this reasoning, except in the abstract—and when taken in connection with all the circumstances presented by each case, it loses, in my opinion, all strength as a guide in practice.

To the first argument, I reply that if a woman, apparently moribund from long continued and excessive vomiting, should recover, it is a rare exception to a general rule, and, as an exception, worthless as a principle of guidance. Again, it is well known that women have succumbed from the operation of this cause who would in all probability have survived, if premature delivery had been resorted to. The second argument, it seems to me, is readily disposed of. The chances of saving the life of the mother, in these cases, by causing the uterus to throw off its contents, are very much increased; and without the operation, should the mother die, the life of the child is also sacrificed.

But, I repeat, the whole question resolves itself into one of expediency, the word expediency in this case meaning—the interpretation which conscience and a high morality may place on the necessity for action.

ants upon this condition, it can not be regarded as a coincidence, but must be accepted as bearing the relation of effect and cause. I believe, indeed, it is as much a necessary result of impregnation as is the enlargement of the mammæ, or the secretion of milk; and it needs but little reflection, I think, to comprehend the particular bearing of this gastric derangement upon the final issue of gestation. I have often remarked to you that nature, in her arrangements, usually displays consummate skill, and is remarkable for the adaptation of means to the accomplishment of her ends. Now, if you will recall to mind, for a moment, the extraordinary changes occurring in the uterine system immediately after impregnation, and remember, also, that the principal of these changes is characterized by congestion, you will, I think, not fail to perceive that the nausea and vomiting are intended to perform a substantial good. Under the general relaxation produced by this disturbance of the stomach, the engorgement of the uterus is held in salutary check; extreme local plethora is thus prevented, and nature in this way is protected against any contravention of her purpose. We have seen that congestion of the uterus is an ordinary and essential result of gestation; but, in order that it may not do harm, it must be circumscribed within certain limits. If you wish to comprehend thoroughly the effects of relaxation on local congestions, you have only to look at the operation of those two powerful agents, the lancet and tartar emetic. No one, I imagine, will deny, that it is through their directly relaxing effects, if employed opportunely, that the first and most efficient impression is made on active inflammatory disease. I maintain, therefore, that the nausea and vomiting of pregnancy are not ordinarily morbid conditions, but should be classed among those processes instituted by nature for the purpose of carrying out more perfectly her scheme of reproduction.

This brings me to the consideration of a most important question, and one to which, for a few moments, I desire especially to direct your attention. It occasionally happens, though an exception to a very general rule, that some women become impregnated, and are neither nauseated nor do they vomit; and what is perfectly in accordance with my observation is—that *such women are very apt to miscarry*. That there is a striking connection between the absence of all gastric irritation and miscarriage, is a fact about which I do not entertain the slightest doubt; and on this assumption I have predicated a treatment which, I am happy to inform you, has proved invariably successful. I could cite to you more than one instance in which miscarriage has occurred under these circumstances, and having been consulted in a subsequent pregnancy, in which the absence of nausea, etc., still persisted, I have been enabled to carry the lady to her full term, and deliver her of a healthy child. The treatment is extremely simple, and it is nothing more than an effort to assist nature, and relieve the uterus from the effects of extreme conges-

tion. I order the patient to take from one quarter to half a grain of ipecacuanha, once, twice, or thrice a day, as circumstances may indicate, for the purpose of producing nausea, thus simulating as nearly as possible the course pursued by nature, when not contravened by influences which she can not control. This course of treatment is continued until about the fourth month of gestation, at which time the nausea and vomiting usually attendant upon pregnancy, as a general rule, cease. If, therefore, you should be consulted by a patient who may have had one or more miscarriages, without any assignable cause, and if, on interrogating her, you discover that she has not had any gastric disturbance, you may very reasonably conclude that the absence of this irritation has been the cause of her miscarriage; and it may happen that the recollection of the simple remedy I have suggested will enable you to be of essential service to your patient, and add no little to your own reputation.

The following case bears so directly on the point under consideration, that I can not forbear citing it: In November, 1851, I was consulted by a lady from the State of Georgia, who imagined that she was laboring under some disease of the uterus, which, as she supposed, had prevented her from having a living child, having miscarried twice successively at the third month of her gestation. After a very careful examination, I could detect no disease of the uterus, nor could I ascertain, on inquiry, that any of the ordinary special causes had operated in the production of the miscarriages. In questioning her particularly as to the state of her health while pregnant, she laughingly observed—"Why, sir, my health was in both instances most remarkable; my appetite was surprisingly good, and I did not know what it was to have a moment's sick stomach." Judging that this was a case of miscarriage from the absence of the two usual phenomena of gestation, nausea and vomiting, I so expressed myself to the lady, and enjoined upon her, as soon as she again discovered herself to be pregnant, to commence with the ipecacuanha, as above directed. She returned home, and in twelve months afterward I received a letter from her physician, Dr. Raymond, in which he remarked: "Your remedy has been attended by the happiest result. Two weeks since I delivered Mrs. W. of a fine son."

Treatment of the Vomiting of Pregnancy.—Although, as we have remarked, the vomiting consequent upon gestation is to be regarded as a natural process, yet, in some instances, it may become necessary to resort to remedies, with a view of keeping it within reasonable bounds. Various medicines have been suggested for this purpose, and, unfortunately, it too often happens that, in many instances, they are of but little avail. I have occasionally derived much benefit from the application to the epigastrium of a cloth saturated with laudanum; chloroform employed in the same way has proved useful. Dr. Simpson speaks favorably of the inhalation of laudanum from a small ether inhaler, hot

water being used to promote evaporation. Opium, in its various preparations, may be given internally, a quarter or half a grain at a dose; or two or three drops of the solution of morphia, in a tea-spoonful of cold water; equal parts of lemon-juice and cold water, say a table-spoonful of each; a table-spoonful of lime water and milk; small pieces of ice, internally; or a piece of ice laid on the epigastric region. The tincture of nux vomica, two or three drops every two hours, is a remedy much extolled by Lobach; but he observes that, after the arrest of the vomiting, severe cramps are apt to ensue, which, however, readily yield to the tincture of the acetate of copper, one drop each hour, gradually increasing to six drops an hour. The extract of belladonna in ointment, applied to the cervix uteri, first suggested, I believe, by Brettoneau and Cazeaux, is sometimes very efficacious. I employed it on two occasions with very striking benefit. Its strength should be $\frac{3j}{\text{of the belladonna}}$ to $\frac{3j}{\text{of adeps}}$; a small portion to be smeared on the cervix once or twice a-day, as circumstances may require. It should be applied with the finger, and not through the speculum, for the reason that this instrument may, especially in sensitive women, induce premature action of the uterus. The following, which is known as the potion of Rivière, has been in great repute, and may be employed oftentimes with advantage:

R	Acid Citric	.	.	.	.	.	gr. xxxvj
	Syrup Sacchar.	.	.	.	.	.	3 viij
	Potassæ Bicarbonat.	.	.	.	.	.	gr. xxxvj
	Aquæ distillat.	.	.	.	.	.	$\frac{3}{4}$ iv

The citric acid to be dissolved in one half of the water, and then add the syrup; the bicarbonate of potash to be dissolved in the remaining portion of water, and a table-spoonful of each to be administered successively.

The vomiting of pregnancy is, I am quite confident, frequently aggravated by a constipated condition of the bowels, and it is proper, therefore, to exercise a due degree of vigilance on this point. The following combination will be well adapted, by its laxative action, to prevent torpor of the system during gestation:

R	Pil. Colocynth Comp.	.	.	.	.	℞i ss
	Extract Hyoseyam	.	.	.	.	℞j
	Pil. Hydrarg.	.	.	.	.	gr. xij
						<i>Ft. pil. xij</i>

One or two pills, as occasion may require.

VAGINAL-RECTOCELE IN A MARRIED WOMAN, AGED THIRTY-SIX YEARS, THE MOTHER OF FOUR CHILDREN, THE YOUNGEST THREE MONTHS OLD; VARIETIES OF VAGINAL HERNIA.—Mrs. S., aged thirty-six years, married, says her womb is down, and she is almost beside herself with the pain and suffering she has endured from constipation of her bowels. She says she has lost more than twenty pounds of flesh within the last

two months, has no appetite, and complains of dragging pains about her back and hips. "How long, my good woman, since you first experienced these disagreeable feelings of which you speak?" "I have had them, sir, ever since the birth of my last child, which is now three months old." "Do you know what caused them in the first instance?" "About two weeks, sir, before my last confinement, I was lifting a heavy tub of water, and I felt as if something gave way, and ever since that time my womb has been down, and I have been a great sufferer from constipation, and bearing-down pains."

It does not follow, gentlemen, because this poor woman says her "*womb is down*," that she is really affected with prolapsion of this organ; and, therefore, in order that we may know her true condition, it will be necessary to make a critical examination of her case. [The patient was placed upon the bed, and the professor proceeded with the investigation.] There is, as you perceive, a tumor projecting beyond the vulva, equalling in volume the ordinary fist. It projects from the posterior portion of the vulva, and is increased in size by any effort of the patient, such as coughing, straining, etc. Now, the interesting question for us to determine is, What is this tumor? In carrying my finger into the vagina, and directing it toward the uterus, I find this latter organ in its proper position; therefore, I know that the tumor is not a prolapsed womb. It is not a polypus, nor an ordinary fibrous tumor, nor is it an abscess, for it does not possess the characteristics of these various morbid conditions. What, then, is it? Is it a prolapsion simply of the vaginal mucous membrane, or is it a prolapsion into the vagina of the rectum itself? In order to ascertain whether there is really a prolapsion of the rectum into the vagina, constituting the tumor now before us, there is a very certain method of diagnosis. I introduce my index finger into the rectum; then, carrying it forward, direct it toward the vagina, and, as you now see, pursuing this direction, the finger passes into the vagina, the only intervening substance between it and the vagina being the anterior wall of the rectum, which is thrown forward, forming the tumor of which this woman complains, and which she has supposed to be "falling of the womb." This is an extremely interesting case, and one of more than ordinary importance. The trouble with which this patient is affected is what has been termed by Malgaigne a vaginal-rectocele, which means literally a tumor of the rectum in the vagina. This clever French surgeon* was, I believe, the first to describe accurately this particular form of tumor.

The vagina may become the seat of various protrusions, forming, in a word, so many vaginal herniæ: for example, there may be prolapsus and procidentia of the uterus; prolapsus and inversion of the mucous membrane of the vagina;† prolapsus of the ovary or intestine into the tri-

* Mémoires de l'Académie Royale de Médecine, tome vii. p. 506.

† See pages 166, 462.

angular fossa, between the rectum and uterus;* prolapsus of the bladder, known as vaginal-cystocele;† and, lastly, as in the instance now before us, vaginal-rectocele. It is quite necessary not only that you should know the various displacements occurring in the vagina, but it is also absolutely essential that you should be enabled to make just distinctions as to the real nature of these displacements. I have elsewhere called your attention particularly to the anatomical relations of the vagina‡ and rectum; and here allow me to remind you that the adhesions between these two organs are rather feeble, so that it is not at all unusual for one of them to become displaced without necessarily involving the position of the other; for example, you will see the rectum prolapsed, and the vagina quite *in situ*; and, again, the vagina will be prolapsed, and even inverted, while the rectum suffers no displacement. The rectum itself is maintained in position by cellular and fibrous adhesions, by which it is united to the pelvic aponeuroses, and also to the sacrum; and, in vaginal rectocele, it must be remembered that it is the anterior wall of the intestine only which falls into the vagina.

Again, the rectum has two coats, which are quite distinct, from which it follows that there may be simple relaxation, or inversion of the mucous membrane alone, or there may be inversion of the two tunics at the same time. In the vagina, on the contrary, the spongy and cellular tissues are more intimately connected with the mucous coat, so that when the latter is relaxed and projects beyond the vulva, it is almost always at the same time accompanied with inversion. The firmest adhesions of the vagina are in front, between the urethra and bladder; and for this reason it is said that simple relaxation of the anterior wall of the vagina does not take place; but, on the contrary, in displacement of this wall, there will necessarily be displacement also of the bladder, giving rise to vaginal-cystocele. Malgaigne forcibly observes that simple prolapsion of the posterior wall of the vagina is a very different thing from displacement of the rectum through the vulva; and that prolapsion of the vagina, consecutive to prolapsion of the uterus, does not necessarily cause prolapsion of the rectum.

Vaginal-Rectocele has oftentimes been mistaken for simple prolapsion of the mucous membrane of the vagina, and even for prolapsion of the uterus itself; and hence, under this erroneous diagnosis, it has not generally been alluded to, in systematic treatises, as a distinct affection.

Causes.—Pregnancy, child-birth, falls, a relaxed vagina, repeated labors, constipation, may all be enumerated among the influences capable of producing this displacement.

Symptoms.—A projection will be observed from the posterior portion of the vulva, varying in volume from a simple fold to the size of the fist; the patient is much annoyed with dragging pains about the hips

* Page 224.

† Page 276.

‡ Page 203.

and back; the digestion becomes much deranged; there is loss of appetite, and also loss of flesh, and these latter symptoms are the direct results of one of the prominent and most distressing accompaniments of this affection—*constipation*. With the constipation, there is more or less irritation about the anus, together with tenesmus.

Diagnosis.—*Vaginal-rectocele* may be mistaken for prolapsion of the uterus, prolapsion and inversion of the mucous membrane of the vagina, polypoid and other growths of the uterus and vagina, abscess, etc. The exercise, however, of a proper discrimination will enable you to arrive at a correct diagnosis. The infallible evidence that this affection exists will be derived from the introduction of the index finger into the rectum, directing it in a curved position toward the vagina: if the finger, thus fixed, passes into the *cul-de-sac* formed in the vulva, you then have positive testimony that the tumor is the result of a prolapsion of the rectum into the vagina, constituting the displacement in question—a vaginal-rectocele. You will remember, when calling your attention to the diagnosis of a case of falling of the bladder,* vaginal-cystocele, I remarked to you that all doubt would be removed if, in introducing the catheter into the bladder, and pressing it downward and forward, you should feel the end of the instrument, with the finger of the other hand introduced into the vagina, pressing against the lower portion of the tumor. It is proper that I should say to you that *vaginal-rectocele* will sometimes exist simultaneously with *vaginal-cystocele*, or with prolapsion of the uterus; and even these three forms of displacement may be present at the same time.

Prognosis.—In a confirmed and long standing case of vaginal-rectocele, the hope of permanent relief will be slight; temporary palliation is all that may reasonably be expected.

Treatment.—The treatment of this affection is divided into curative and palliative—the former consists in an operation, the object of which is to remove the relaxed portion of the mucous membrane of the vagina. It has also been proposed to remove a portion of the coats of the rectum, and afterward induce adhesion between the intestine and vagina, but it is quite evident, as Malgaigne observes, that such a course is not without danger—at least its beneficial result is more than doubtful. The palliative treatment consists in relieving the prominent symptom, the constipation—and afterward supporting the prolapsed intestine by means of a pessary. The bowels should be kept soluble by the frequent use of enemata; and if found necessary $\frac{3}{4}$ j of castor-oil may be administered occasionally with advantage. The prolapsed intestine must be supported by the introduction of a pessary, the form of which must depend upon the circumstances of the case. Great benefit will sometimes be derived from the use of a piece of soft sponge, enveloped in oil-silk, carefully introduced into the vagina, and kept in place by a bandage. Whether a

* Page 279.

sponge or pessary be used, you must not forget the importance of having it withdrawn daily for the purpose of ablution.

EXCESSIVE PAIN IN THE LEFT MAMMA IN A YOUNG GIRL EIGHTEEN YEARS OF AGE—MASTODYNIA NEURALGICA—IRRITABLE TUMOR.—Mrs. L. brings her daughter to the Clinic for advice in consequence of a severe pain in the left breast, which has annoyed her extremely at times for the last year. "Is the pain of which your daughter complains constant, or is she sometimes free from it?" "It is not constant, sir, but it is very bad just before her courses come on." "How is the pain after the courses have ceased?" "It then leaves her, sir, and she is quite comfortable." [The Professor examined the breast, there was no change of color in the integuments, nor was there the slightest evidence of inflammation—there was, however, a small movable tumor the size of a pea, exquisitely sensitive to the touch.] "You say, madam, the pain is always increased just before the courses." "Yes, sir." "Does the pain subside during the period of the menses?" "Yes, sir." "Are your daughter's monthly turns as they should be?" "No, sir, she only has them on her about two days." "How long has this been the case?" "Only for the last year, sir; and ever since that she has complained more or less of the pain in the breast." You will occasionally, gentlemen, meet with this form of disease, and it is especially worthy of your attention. It is a painful affection of the *mamma* first brought to the notice of the profession by Sir Astley Cooper, and called *Mastodynia neuralgica*, sometimes known as irritable tumor. It consists in exquisite sensibility in one or more portions of one, and sometimes of both *mammæ*. The pain is described by the patient as piercing, a species of *tic douloureux*, commencing in the breast and passing on to the shoulder and inner side of the elbow, extending sometimes to the fingers, and occasionally to the hip. The disease is very apt to develop itself between the ages of fifteen and thirty years, and is not observed before the period of puberty. The integuments preserve their natural appearance, there being no evidence of inflammation. The pain is oftentimes much increased by attempting to sleep on the affected side. The maximum of suffering is just before the menstrual evacuation, and it becomes very much diminished as the catamenia ceases to flow.

In the case of this young woman I discover a small movable tumor in the breast, the size of a pea, giving rise on the slightest touch to exquisite suffering. As a general rule, there is only one tumor, although occasionally there may be several, and they will sometimes present the volume of a marble. One remarkable feature about these tumors is, that, continuing as they may for years, they neither increase in size, nor do they pass to suppuration. This peculiar irritable condition of the breast is not always accompanied with tumor—sometimes there will be no appearance of any thing extraneous, the only morbid feature being the

excessive sensibility of the *mamma*. Irritability of the breast is not, in my opinion, of rare occurrence. On the contrary, you will often meet with it, and it is important that you should not mistake it for other conditions of the organ. When accompanied by tumor, it may possibly be confounded with cysts, hydatids, etc., which occasionally develop themselves in the mammary glands; but a due degree of attention will enable you to form a correct opinion. In hydatids and cysts, there is neither pain nor tenderness—but there is tension, and subsequently, fluctuation. In *scirrhus*, the tumor is of extraordinary hardness, slightly tender, and characterized by a lancinating pain, usually limited to the breast itself—the skin covering the tumor becomes adherent, and of a tuberculated character.

Mastodynia neuralgica, whether accompanied by a tumor or not, may be considered as especially connected with undue irritability of constitution, and is in more or less alliance with some abnormal state of the menstrual function, either menorrhagia, dysmenorrhœa, or defective menstruation.

The treatment should be both general and local, the former being intended to fortify the constitution, and break up, if I may so term it, the irritable diathesis; the object of the latter, the local treatment, being the temporary mitigation of pain.

The system, in these cases, will usually improve under a judicious administration of the ferruginous preparations, sea-bathing, exercise in the open air, nutritious diet, etc. Sir Astley Cooper recommended, as a local application, a plaster consisting of equal parts of the *ceratum saponis* and *extractum belladonnæ*, or a poultice of bread crumbs and tincture of belladonna.

As the girl before us is laboring under a deficiency of the menstrual function, and as she is evidently chlorotic, I shall order for her the following pills, two of which are to be taken daily:

℞	Ferri Sesquioxidi	.	.	.	.	.	.	gr. xii
	Pil. Galban.	c. }	.	.	.	.	.	āā ʒj
	Pil. Colo.	c. }	.	.	.	.	.
	Theriaci	.	.	.	.	.	.	q. s.
								<i>M. ft. pil. xij</i>

The diet should be nutritious—and the painful breast may be rubbed with equal parts of sweet-oil and laudanum.

PUDENDAL HERNIA IN THE RIGHT LABIUM EXTERNUM, IN A MARRIED WOMAN, AGED FORTY-TWO YEARS, THE MOTHER OF FIVE CHILDREN.—Mrs. O. says she has a swelling in the lower portion of her person, which increases when she walks, and sometimes causes her much pain. “How long, Mrs. O., have you been troubled with the swelling of which you speak?” “About two months, sir.” “Do you know what

caused it, my good woman?" "Indeed I do not, sir, except it was hard work."

It is impossible, gentlemen to arrive at any accurate opinion touching the nature of this swelling without an examination; for swelling in the lower part of the person, like swelling in any other portion of the system, may result from various causes, and assume various phases. [Here the patient was placed on the bed, and the Professor commenced a careful examination of the tumor.] You perceive, in looking at the parts, that the tumefaction is seated in the right *labium externum*; it is conical in shape, and its long axis is from above downward. In gently grasping the tumor, there is no pain, nor is there any evidence, from the aspect it presents, of inflammatory action. There is an entire absence of fluctuation, and the swelling is evidently movable; for, as you see, I can make it ascend, and now it has completely disappeared. What, then, is this tumor; what its nature; in one word, what has produced it? This is the question for us to determine, and on a proper decision must depend the hopes of this woman for relief. Again, as I remove my finger, which acts as a sort of support, the tumor descends, and causes a protrusion into the *labium externum*.

"Madam, will you be kind enough to cough?" You perceive, gentlemen, the effect of the effort at coughing on the swelling; its volume is increased by the cough, and there is an impulse imparted to the finger, as it grasps the base of the tumor. From this latter circumstance, together with the important fact that the tumor can be made to disappear by properly-directed pressure upward, it is very evident to my mind that the swelling in the *labium externum* is occasioned by a hernial protrusion into that part. I have already spoken to you of the various morbid conditions capable of giving rise to enlargement of the *labia externa*, and shall not refer to them again, except simply, to remind you of the great necessity of accurate diagnosis in these cases.* But in the present instance, the enlargement is unquestionably due to a hernia, and this is a subject of too much interest to be passed by in silence.

Hernia into the *labium externum* was first described by Sir A. Cooper, and he gave it the name of pudendal hernia: it is of extremely rare occurrence, and, therefore, the case before us is of more than ordinary import. It is sometimes called, when the protruding body consists of intestine, *vulvar-enterocele*, and when the bladder is thrust into the labium, as is alleged has taken place, it is known as *vulvar-cystocele*. In pudendal hernia, the displaced mass descends between the vagina and ramus of the ischium, and forms in one or other of the *labia* an oblong tumor, which can be recognized by the touch within the vagina, as high up as the *os uteri*. In carrying my finger along the vagina, I can very distinctly trace the tumor on its internal wall as far as the neck of

* See pages 340-406

the uterus ; and, with the other hand applied to the external surface of the labium, I feel that I grasp the protruding mass between the two hands. The bladder I find perfectly in position ; and hence it is not this organ which has descended into the labium. The protrusion, on the contrary, consists of a portion of intestine, and may properly be termed a *vulvar-enterocele*.

Causes.—*Pudendal Hernia* may be induced by strains, carrying heavy burdens, a relaxed vagina, obstinate constipation, falls, etc.

Symptoms.—A tumor in one or other of the labia, the volume of which is increased in the standing position, or in coughing. More or less pain in taking exercise, or when the patient is constipated.

Diagnosis.—Attention has already been drawn to this subject at pages 340–406.

Prognosis.—Under ordinary circumstances, there is no danger attending this form of hernia ; but it may become strangulated, requiring a surgical operation ; and, as in all cases of strangulated hernia, there is of necessity more or less danger.

Treatment.—The treatment consists, in the first place, in the reduction of the tumor by the taxis ; and, secondly, in the prevention of its return by the application of an instrument. I will here proceed to the reduction of the hernia. The patient, as you perceive, is on her back, the shoulders and hips are gently raised by pillows, with a view of relaxing the abdominal muscles. I introduce into the vagina the index finger of the right hand, for the reason that the hernia is in the right labium, and with this finger the tumor is gently pressed against the side of the vagina, while, with the finger of the other hand, I seize the lower portion of the tumor in the labium, and push it cautiously backward and upward in a direction parallel to the vagina. The evidence that the hernia is reduced is the fact that there is no longer any swelling in the labium. After the reduction, in order to prevent a recurrence of the hernia, it will be necessary to have recourse to some mechanical support. For this purpose, a cylindrical pessary may be used, taking care to introduce it so that the base will be upward, the object being to exert pressure on that portion of the vagina which has allowed the intestine to escape and make its way between its external wall and the ramus of the ischium. With a view of retaining the pessary in position, an ordinary T bandage will be found useful.

But, gentlemen, there is one point in connection with the treatment to which I have not yet adverted, and which, if neglected, will not only cause the patient much annoyance, but will be a constantly exciting cause to a renewed prolapsion of the intestine. I allude to the constipation to which this woman informs me she has been subject. In all cases of displacement of the uterus and adjoining organs, as well as in diseases of these viscera, whether organic or functional, the affection will always be aggravated more or less by constipation ; the very at-

tempt at defecation causing a straining which can not be otherwise than prejudicial. This is an important fact for you to remember. As the patient before us is feeble and requires tone, I will recommend the following pills, one of which may be taken twice a day, as occasion may require :

R	Quinæ Sulphat.	.	.	.	.	.	.	3j
	Pil. Gambog. c.	.	.	.	.	.	.	3 iss
								<i>M. ft. pil. xxx.</i>

SPASM OF THE VAGINA IN A MARRIED WOMAN, AGED TWENTY-TWO YEARS.—WHAT IS THE DIFFERENCE BETWEEN SPASM AND NEURALGIA OF THE VAGINA?—Mrs. M., aged twenty-two years, married, complains of extreme suffering in the vagina, at times, and begs that something may be done for her. The case of this patient, gentlemen, embodies several points of more than usual interest. I have had a very full conversation with her, and she informs me that she has been married only four months, and is quite unhappy because she can not perform the duties of wife—in a word, in every attempt at intercourse she says she is thrown nearly into convulsions. This condition of things, she fears, has tended to estrange her husband, and she is most anxious to obtain relief. I need not speak to you of the necessity of just discrimination in cases like these, involving as they do not only the health but the happiness of the patient. I have subjected this woman to a thorough examination, and have discovered that she is affected with *spasm* of the vagina, a peculiar morbid condition characterized by a convulsive contraction of this canal.

The first question, which naturally arises in the mind is, what has produced this unnatural state of things? Spasm of the vagina may present itself to your observation in one of two forms—either idiopathic or symptomatic. When idiopathic or primary, it will generally be found that the spasmodic contraction assumes an intermittent character, with an entire absence of all inflammatory symptoms, and develops itself only under the influence of certain exciting causes, such as coition, or a vaginal examination with the speculum or finger; the spasm, in these cases, being due to a morbidly sensitive condition of the nervous system. In the patient before us, we have an example of the idiopathic form of this affection, and I am quite confident we shall be enabled to afford her relief. But you may very naturally ask the grounds of my diagnosis. They are as follow: 1. There is an entire absence of redness, heat or swelling in the vagina, and as far as mere appearances avail, the part is in a perfectly healthy condition. The only abnormal feature in the case—and this is characteristic of the idiopathic form of the disease—is the exquisite sensibility to the touch, immediately causing an irregular or spasmodic contraction of the organ. The degree of contraction will depend upon the violence of the affection; sometimes, during the spasm,

the cavity of the vagina becomes only partially obliterated, while again, as is the case in the present instance, the walls of the canal closely approach each other, so that it is with great difficulty the finger can be introduced. In symptomatic spasm of the vagina, you will find disease of the uterus or vagina itself—sometimes, too, it will result from an affection of the rectum. I have known it to be occasioned by hemorrhoidal tumors, and prolapsion of the mucous membrane of the intestine. The diagnosis of the symptomatic form is quite simple—you will always, by a careful examination, be able to recognize the evidences of the disease, to which it is to be traced, whether the disease be in the uterus, vagina, or rectum. A fact worthy of recollection is, that, in the symptomatic form, the contraction is not intermittent, but continuous, depending upon the duration of the disease of which it is but a symptom.

Treatment.—This patient has an earnest claim upon us. Her situation is strikingly peculiar, and whether she receives relief or not may be the turning point on which her peace of mind and happiness are to depend. It is, therefore, the duty of the physician, under circumstances like these, to exercise a full measure of vigilance, and by a just appreciation of the true cause of disease, to afford the necessary relief. The remedies for the patient before us must be both local and general. The former should consist of the warm hip bath, together with injections into the vagina of twenty drops of laudanum in a wine-glass of tepid water twice a day—but what I most prefer in these cases, and which I regard as one of the most effective remedies is the belladonna ointment :

R	Extract Belladonnæ	.	.	.	.	.	.	.	.	3j
	Adipis	.	.	.	.	.	.	.	.	℥j
										<i>℞. Ungt.</i>

Let a small portion be applied to the vagina once or twice a day, or the following suppository may be introduced into the vagina every night for several successive nights :

R	Extract Belladonnæ	.	.	.	.	.	.	.	gr. ij
	Sapon. Castil	.	.	.	.	.	.	.	gr. iv
									<i>Misce. ft. suppos.</i>

The above suppository may be used with advantage in cases of nervous dysmenorrhœa.

The constitutional or general treatment should consist of remedies calculated to fortify, and change the morbid condition of the nervous system ; and for this purpose the sulphate of zinc will be found a useful agent :

R	Zinci Sulphat.	.	.	.	.	.	.	.	gr. xxiv
	Extract Gentianæ	.	.	.	.	.	.	.	3 ij
	Ol. Anthemis	.	.	.	.	.	.	.	gtt. xij
									<i>Divide in pil. xxxvj.</i>

Two pills three times a day, together with nutritious diet, and exercise in the open air.

The treatment of the symptomatic form of vaginal spasm will consist in remedies appropriate to the disease producing it.

Allow me here, for the moment, to call your attention to another affection of the vagina—neuralgia—with which it is possible that spasm of this canal may be confounded. Both of these affections have some symptoms in common, and each will occasionally assume the idiopathic and symptomatic classification. In the former, vaginal neuralgia, like vaginal spasm, will exhibit no trace of disease, the only feature being exquisite sensibility to the touch. It is also intermittent. In the symptomatic form, it will sometimes be traced to disease of the uterus, vagina, or rectum—and not unfrequently to spinal irritation. You will sometimes meet with neuralgia of the vagina at the final cessation of the menses, and, in this case, it will often be connected with disease of the uterus. But there is one constant and striking characteristic circumstance which will enable you to distinguish the two affections, it is this—in neuralgia of the vagina *there is no spasm*. This affection will usually yield to the belladonna ointment; and sea-bathing is particularly efficacious. In some cases, it will be necessary to cauterize lightly the surface of the vagina. If it be due to spinal irritation, an issue on the side of the spine will be indicated.