

CHAPTER VII

NEURASTHENIA, HYSTERIA, AND MALINGERING

NEURASTHENIA

Frequency of Neurasthenia.—One of the first things that strikes an examiner who has to deal with workmen is the great prevalence of neurasthenia among them. Neurasthenia used to be generally considered a disease of the leisured classes, but experience proves that it is very prevalent also amongst workmen. Sir Clifford Allbutt points out that it is to be found equally “in busy citizens and idle damsels, in the market-place, the rectory, or the workhouse.” He further remarks that the development of the higher nervous centres makes for control, but that listlessness and frivolity are not confined to any one rank in life. He states as his opinion that neurasthenia is at least as common in men as in women.

Neurasthenia, or “nervous exhaustion,” is essentially a mental state, but has always some bodily disorder associated with and underlying it.

Causation.—The immediate causation may be purely psychic, or purely physical—*i.e.*, traumatic; more often it is partly psychic and partly traumatic, and the share of these two factors varies greatly in different cases and under different circumstances.

As an instance of purely psychic origin, an engine-driver who saw an apparently inevitable accident before him has been known to suffer from bad neurasthenia, even when the accident was at the last moment averted.

Other instances are afforded by the cases of E. J. and E. K., already detailed on pp. 144 and 145.

That many cases are psychic in their origin is shown by the fact that emotional or dramatic incidents, which at the

time have achieved considerable notoriety, and have had the most strenuous efforts of the sensational Press expended on them, are often followed by a number of cases of neurasthenia in which the actual traumatism has really been *trifling*.

Generally speaking, although the rule has many exceptions, it may be said that the more the accident results in actual physical injuries, such as broken bones and so forth, the less likelihood is there of serious nervous sequelæ, especially if the case is wisely treated from the first.

It is a well-known fact that in railway accidents passengers who at the time happen to be asleep or tipsy do not suffer so much subsequently from mental symptoms as those who are in full possession of their senses.

A more remotely contributory factor is heredity—the inheritance of a nervous system unable to bear much stress.

But the condition is mainly acquired; it is not inborn in the same degree as hysteria is inborn, and the prognosis, therefore, is much better than that of hysteria.

Neurasthenia, then, is a disease of which the cause is stress in one or both of two forms, namely: (1) Sudden injury to body or mind—*i.e.*, shock; or (2) chronic injury to the mind in the form of worry or anxiety.

In the traumatic form of neurasthenia, the stress is always of the sudden kind in the first instance. The accident may *in itself* be insignificant, but is followed by chronic anxiety or worry.

Much more than half the battle in treating these cases is to prevent the acute condition becoming or being made chronic. The acute condition tends to become chronic if there is undue delay in settling claims for damages and so forth, or the lack of a friend in need to administer the right kind of suggestion and to help the mind to realize symptoms of improvement as they occur. There is no doubt the condition is often made chronic by the suggestions of injudicious friends or *interested parties*.

A Chinese philosopher once said: "If you wish to convert a man, you must persuade him that when he does well he is obeying the dictates of his own heart;" and the same principle is very applicable to cases where treatment by suggestion is necessary.

For some time it has been my practice to induce insurance companies for whom I act to send their more difficult cases, such as a stiff shoulder following dislocation, or patients who are indifferent as to recovery, to a trained masseur, who for a definite sum per week applies not only massage, but also *psycho-therapeutic treatment in the form of candid advice, and encouragement to use the affected joint.*

It is unfair to insurance companies that a dislocated shoulder should be allowed to become stiff from want of use, and thus cause incapacity for work for four, six, or even twelve months, simply because the patient has not been taken in hand from a *mental* point of view.

In the long-run, needless exaggeration of symptoms will prove disastrous to the working-classes themselves, for by forcing up insurance rates it will increase the price of commodities.

Symptoms.—The neurasthenic is unable to fix his attention for any length of time, or to perform any prolonged intellectual labour: he is quite unable to make up his mind as to any particular course of action, and vacillates to and fro, first inclining to one view and then to another, until he reduces himself to a condition of complete mental impotence.

The neurasthenic is irritable, he avoids loud sounds, bright lights, the noise and chatter of society, and it is significant that his symptoms are ameliorated by rest and proper food.

The pretended neurasthenic, who in the witness-box is able to stand a prolonged cross-examination without getting tired and confused, gives himself away. Just as the neurasthenic is incapable of prolonged mental exertion, so is he of physical work. His muscles are easily tired, he is unable to walk or bicycle the distances he formerly could, his whole muscular system lacks tone. He cannot read for any length of time, owing to accommodative asthenopia.

Loss of weight is the rule, though a small proportion of neurasthenics become fat. Cerebral tissue seems to hold the master-key to all functions, and mental anxiety and worry, as is well known, apart from neurasthenia, make for leanness.

Hyperæsthesia of various portions of the body is one of the commonest features of neurasthenia, and neuralgias of all sorts are frequent.

The typical headache of neurasthenia is the well-known feeling of weight on the top of the head. Another common symptom is pain along the course of the occipital nerve or over the temples. Sleeplessness is a very usual symptom, and takes two forms: one—the more general—where the patient is unable to get off to sleep; the other where, after a short sleep, he wakes and is unable to get to sleep again. Many neurasthenics suffer from giddiness, which is occasionally so severe as to lead those with little experience of neurasthenia to suspect Ménière's disease. A neurasthenic may also suffer from the various "states of anxiety"; it may be, for instance, the fear of open spaces, of closed confined spaces, of solitude, of crowds, or of impending ruin.

The knee-jerks are exaggerated, and are somewhat characteristic in that the swing of the leg is a long one, and it is brought back with a jerk. The patient usually starts violently when the knee-jerk is being elicited.

Cardio-vascular symptoms, such as palpitation of the heart, are very common; the heart beats quickly, but with diminished force, so that the blood-pressure is low. The abdominal aorta sometimes pulsates violently, giving the unwary the impression that there must be an aneurism present.

The patient suffers from atony of the stomach and bowel, so that he is a martyr to indigestion, flatulence, and constipation.

Gastro-intestinal dyspepsia of the nervous type is a common complaint, and is distinguished by the fact that it is independent of food, and can be cured by drugs, such as phenacetin, and by suggestion.

The foregoing symptoms may appear one by one, and are often very gradual in their onset; their sequence, rapidity, and occurrence, are largely dependent upon the environment of the patient. Such of these symptoms as are present react upon the already over-sensitive brain, and by introspection gradually become magnified, until at last groups of symptoms assume the importance of a new disease.

Neurasthenics have difficulty in appreciating that the symptoms they complain of are not really evidence of organic disease, but that they themselves are for the time temporarily abnormal.

It would be unprofitable to attempt to divide into classes the different types of neurasthenics that are constantly met with. It may be said, however, that, broadly speaking, the cerebro-spinal, the cardio-vascular, and the gastro-intestinal systems claim the preponderance of symptoms in different patients, according to whether the pressure is greatest on one or other of those systems.

For instance, one would have no difficulty in allocating to the cerebro-spinal type a patient complaining of increased general sensibility, a constant feeling of being tired, headache, vertigo, loss of interest in the environment (leading to the patient becoming self-centred), lack of sleep, inability to think, study, or do work, phobias, general pessimism, irritability of temper, lack of initiative and energy, attacks of vague sensations in the head—in short, the group of symptoms which might be very aptly described by Mercier's expression, "a cloudy swelling of the self."

On the other hand, where the gastro-intestinal system bears the brunt of perverted nerve weakness, we should expect, and do find, gastro-intestinal trouble, and symptoms referable to want of tone of the abdominal organs. But it is seldom, if ever, that cases purely of one type or the other are met with. The two are usually intermingled in varying proportions.

HYSTERIA

Hysteria is a most fascinating disease, and for it, like most other fascinating things, we are, as Gowers remarks, indebted to the female sex.

Hysteria is unknown amongst barbaric races, but in civilized countries it is met with very early in life, even among young school children. It is not uncommon amongst boys at puberty. Fifty per cent. of the cases occur between the ages of ten and twenty years. It is based for the most part upon hereditary predisposition, with added physical, mental, and moral causes; hence, in ordinary cases of this type, the importance of inquiring, not only into the history of the patient, but also into that of the family. In medico-legal cases inquiry into individual or family history is, as a rule, a futile proceeding. Personally, I never investigate the previous history of a patient

who is sent for medico-legal examination. In former years I did so, and invariably found the inquiry misleading, and generally that the accident was apparently the first departure from the most perfect health that the individual had ever experienced. Indeed, even the possibility of an attack of measles or scarlet fever in infancy is often strenuously denied !

Hysteria Defined.—No satisfactory definition of this disease has ever yet been achieved. Perhaps the best is that of Mobius: “ A state in which ideas control the body, and produce morbid changes in its functions.”

Hysteria is not the will to do wrong, but the lack of will power to do right.

The Chief Characteristics of the Disease.—The exhibition of sympathy by others fosters that increased sense of self-consciousness which is never absent from the true hysteric. The sense of self-consciousness appears to be increased at the expense of the patient's appreciation of her surroundings. There is always some loss of appreciation of environment. While subjective sensations are increased, perceptions of objective things are often correspondingly diminished; for instance, contraction of the field of vision, or defective sensation in this or that part of the body.

Another feature of hysteria (practically never absent) is defective will power. This probably is due in part to loss of memory of experiences, and in part to the absence of the reminders which should come in from the environment. From lack of will power spring the perpetuation and magnification of various morbid symptoms which are at first unresisted, then welcomed, then invited, and finally self-induced.

Causation.—The controlling power of the cortex of the brain—i.e., its power of inhibition over the lower centres—has been acquired during life by experiences of environment and memories of these experiences; and when these are in abeyance we are met by *perversions of inhibition* of various kinds, here too little and there too much. There is probably *failure of inhibition*—or shall we say perversion of inhibition ?—in outbreaks of hysterical convulsion, in the swaying of the body to which some patients are prone, in the contractures of muscles which are energized from the spinal cord, and in the

undue magnification of the effect of trifling abnormal sensations. There is probably *excessive inhibition* in "paralysis," and possibly in the anæsthesias to which hysterical patients are subject.

With the perversion of inhibition there is nearly always some dissociation of the personality—a tendency to contemplation of the "other" self as a centre of interest. A very marked feature of hysteria, and of the self-pitying type of woman, is the desire to be the centre of interest. Here we can again detect some "cloudy swelling of the self." No wonder hysteria has been called a "disease of pose."

Hysterical people think they are at their best when they are firm, but they are always firmest when they are wrong. Their minds easily run into moulds, but never set.

Viewed from the moral side, these patients are gregarious, it is torture for them to be alone; but there is an impairment or loss of the true social instinct, because they are nearly or quite lacking in the readiness to *render* mutual aid, which is always characteristic of that instinct.

Certain points concerning hysteria should always be carefully borne in mind: first, this disease has nothing to do with the sex organs; second, no organic cause for the symptoms is known; third, hysteria is not malingering, for the patient believes in the reality of the symptoms, whereas the malingerer knows better. The patient says and believes "I cannot"; the friends say "she will not"; the doctor says "she cannot will."

Symptoms.—I do not purpose going into all the protean forms in which hysteria may manifest itself, but only to deal with those which are most closely associated with traumatism and most nearly resemble malingering, and of these perhaps the most common, and at the same time the most important, are the sensory manifestations.

Pain is always subjective; in hysteria it is remarkable for the rapid changes of its locality and its sudden alteration in character from mild to severe, and severe to mild, without any apparent cause.

Loss of Sensation.—This is a very common complaint of hysterical patients, and its area does not follow anatomical

lines. They do not describe a loss of feeling limited to the distribution of any particular nerve, but that the whole of one hand, or of one arm, or of one side of the body, is insensible; hence we have such phrases as "glove" and "stocking" anæsthesia. That the transmission of impressions is not entirely lost in the parts affected can readily be shown; for while he is indifferent to being pricked or hurt by the examiner, he nevertheless never injures himself or burns himself on the insensitive areas in the way that a sufferer from organic anæsthesia, such as syringomyelia, may do. Moreover, the pupil on the side which is being pricked may be seen to dilate; an insensitive hand will close round a walking-stick presented to it, and hysterically anæsthetic hands are still quite capable of knitting without the guidance of the eye. The patient can be waked from sleep by pinching him in the anæsthetic area, and *reflexes* will still occur in the area which is involved.

It is noteworthy, however, that in the region of anæsthesia needle-pricks will often fail to draw blood, and the temperature is in some cases lower on the affected side than on the other. Another feature is the variability in the position of the areas declared to be insensitive. If accurately mapped out at one sitting, at a subsequent examination they will often be found to have markedly changed their site. There is here, of course, a close resemblance to malingering, but nevertheless this is a usual feature in hysteria. Moreover, the areas of "anæsthesia" of the different senses subserved by the skin—touch, pressure, heat, cold, and pain—are by no means coincident in many cases, and there is a difference between the anæsthesia of the epicritic sense and that of the protopathic sense described by Head and other observers.

Diminution or contraction of the field of vision, though not so common in this country as in France, should always be looked for. It is not difficult to prove that the area of the retina declared insensitive can in some cases react to impressions, since the hysteric, although displaying a marked retraction of the field of vision, will walk and turn about in a room in a fashion which a patient suffering from organic contraction of the field is quite unable to do. It must, however, be remembered that this is no proof of conscious vision in the ordinary meaning of the term. It may be compared with the guidance

afforded by impressions from the feet and lower limbs in walking, when we are practically unconscious of anything but a conversation or the contents of the shop windows, or a need for dodging the traffic. Such impressions probably hardly reach the cortex, but are short-circuited in the optic thalamus and corpus striatum.

Janet records a striking case of an hysteric the starting-point of whose disease had been a fire. The sudden presentation of a lighted candle always produced in him an hysterical seizure, and it was noted that when a lighted candle was presented to a portion of the retina declared to be insensitive he immediately had an hysterical fit.

In a similar case a patient was liable to convulsions on sight of a mouse, and the convulsions were induced by the presentation of a stuffed mouse to an apparently insensitive area of the retina.

Paralyses.—To simulate paralysis is thought to be a comparatively easy thing; to the uninitiated it seems sufficient if complaint is made of pain in the back, general nervousness, and loss of voluntary motor power. Fortunately, the simulant is unaware that true paralysis—such, for example, as occurs in lesions of the anterior horns of the spinal cord or in peripheral neuritis—has characteristics, such as flabbiness, softness, and lack of tone of muscular tissue, which it is impossible to imitate. Organic paralysis never shows itself by the presence of one physical sign only; it is always accompanied by others which are beyond control of the will. In simulated paralysis, when an attempt is made to move the limb, a certain firmness and stiffness of the muscles is sometimes detected at the moment when it is first handled; and when a limb said to be paralyzed is held in an elevated position, and then suddenly allowed to drop, it is often momentarily held before it drops.

Monoplegia, and especially partial paralysis of one leg, is sometimes feigned, but complete paraplegia is of rare occurrence and is seldom assumed in ordinary civil practice. With soldiers and prisoners, however, the condition is not unknown, and the following case will be of interest:

E. Q.—A friend, who is the chief medical officer in one of His Majesty's prisons in London, told me of a prisoner who immediately after sentence simulated hemiplegia. He persistently refused to

attempt to stand, and during the whole period of his incarceration, lasting some three months, he refused to move.

Examination showed an entire absence of any kind of the well-known physical signs indicative of motor paralysis. Every day he was taken to the airing court, where he collapsed into an inanimate heap, and there he remained day after day during the period allowed for physical exercise. He was made to serve the full period of his imprisonment, all good marks which would have shortened his incarceration being denied him.

When his time expired he had to be sent home in a cab; his lower extremities were still apparently useless. A prison attendant who occupied a seat on the dicky beside the driver was sent with him to his home. When about a mile from the prison, and opposite a public-house, the attendant heard a shout, and, on looking round, saw his charge had left the cab whilst in motion, slammed the door, and was almost into the public-house before the cab could be drawn up!

It should be remembered that monoplegias are sometimes hysterical, and often fraudulent. A monoplegia should always be viewed with much suspicion if its advent has not coincided with considerable cerebral disturbance. Severe headache, unconsciousness, or convulsions, are the usual accompaniment of an intracranial lesion producing a monoplegia. The spinal centres for the localization of movements of a limb extend over several segments of the cord; the result is that a *monoplegia* as the result of an accident to the spinal cord is practically unknown, for an injury which is sufficiently extensive to involve several segments will have also caused paralysis elsewhere.

Paraplegia and crossed paralysis are more common than hemiplegia, or one-sided paralysis; and as a rule the leg suffers more than the arm. The loss of power is rarely absolute, and there is no wasting except from disuse. Certain groups of muscles are not affected, but the whole limb is declared to be more or less powerless. The gait of the hysterical leg is very characteristic. In walking, the whole limb is dragged behind, as if it were a dead weight, and no effort of circumduction is made, as in the organic palsies. It is noteworthy that often, in the early stages of the administration of an anæsthetic, a paralyzed limb will be forcibly flung about by the patient, whereas a seriously injured limb (*e.g.*, a fracture) in an otherwise healthy patient is very seldom moved at all during the induction of anæsthesia.

A genuine hemiplegia is soon followed by one-sided changes of the reflexes of a very evident nature. Paralyzed muscles offer no resistance to their opponents, and consequently contractions and deformities very soon appear. Even an artful rogue cannot make his muscles waste except by disuse, or his nerves give the reaction of degeneration.

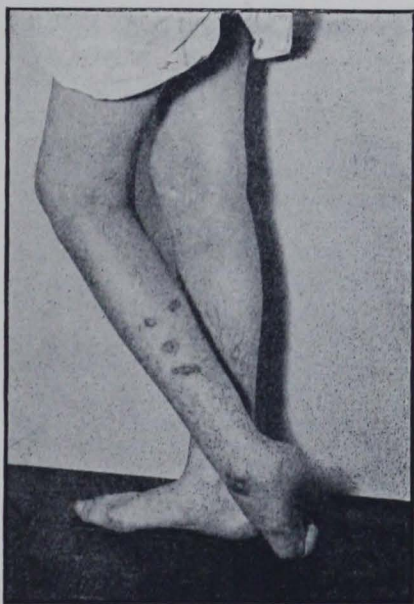


FIG. 4.—GAIT IN A CASE OF LEFT-SIDED HYSTERICAL HEMIPLEGIA. The marks on the left leg are scars of self-inflicted burns. (From Purves Stewart's "Diagnosis of Nervous Diseases.")

The following case illustrates the extreme difficulty in dealing with the after-history of genuine paralysis. From a layman's point of view paralysis is incurable, and the difficulty in dealing with the after-history of a genuine, followed by an hysterical paralysis, is at all times very great. But when this is complicated by weekly payments under the Workmen's Compensation Act, extending over many years, and when, as in the following case, a claim for continued incapacity is supported by an eminent member of the profession, the difficulty of proving that the organic condition is cured, and has been replaced by functional disease, is particularly great. The case

also exemplifies the importance of never failing to make a thorough examination, and of not lightly foregoing an opinion which has been based upon a deliberate and painstaking inquiry into the facts of a case.

E. R., a nursery governess aged thirty-six, had a septic wound, the result of an accident, on one of her fingers. While under treatment for this, caries of the seventh cervical vertebra was discovered. She was therefore sent to a London hospital.

A report from that institution stated that she had, amongst other physical signs, a plantar extensor reflex, ill-sustained ankle clonus, visual fields contracted, lateral nystagmus, and a positive Wassermann. Her speech was described as drawling, but her brother stated that it had always been so. A skiagram showed erosion of the bodies of the third, fourth, and fifth cervical vertebrae.

She was under treatment for a long time, and three years after the accident was sent to me for examination. She then gave her age as two years older than it really was, and complained of two things only: (1) weakness in the right arm, (2) difficulty in getting up and down stairs.

Examination.—She was a strong, fresh-complexioned, healthy-looking woman who had a sluggish, thick, staccato method of speaking, as if her tongue were too big for her mouth. A searching examination of the nervous system revealed no evidence of organic or nerve disease. She was evidently obsessed with the idea of her recent long illness, which was scarcely surprising, as she had been laid aside for three years.

Her method of walking seemed to be one of studied laboriousness; occasionally, however, it was fairly brisk. Her allegation was that she could not even attempt work, because she could not go upstairs; but she actually did so in my house, and in descending never put two feet at the same time on one step. At my request she suspended herself on a trapeze in my consulting-room, and, as she turned the scale at 10 stone 8 pounds, she had really supported half her own weight with each arm.

On interlocking my digits with those of her right hand, and asking her to resist my straightening her fingers, she did so; she had therefore not lost the power of flexion of her hand.

On asking her to bend her elbow, tighten her biceps, and prevent my forcibly straightening her elbow, she did so successfully; her upper extremity had obviously wholly recovered its full vigour. Her allegation that she was incapacitated from acting as a nursery governess because she could not lift children, in consequence of the weakness of her right arm, was therefore disproved.

She stood with both her toes and heels together and eyes shut without any signs of vertigo; indeed, I induced her to bend her left knee and stand on the fore part of her right foot alone, whilst she bent and I steadied her with my hands. She had therefore not lost power in her lower limb.

She complained of no pain when I pressed her cervical vertebrae over the seat of her former trouble. In short, I could find nothing physically wrong with her, and no defect except her method of speech. She had therefore made a remarkable recovery.

She was not malingering, but did not appreciate the fact that she had recovered. Her type was the phlegmatic, and her environment bad. When told she really ought now to be getting back to work, she advanced a fresh symptom, incontinence of urine, but, as this was obviously not seriously intended, I did not pursue it.

I told her that she had had a very serious illness, that it had lasted three years, but that she had been gradually recovering, and suggested that I might, at the expense of the insurance company, procure a few weeks' residence in Maida Vale Hospital, where I thought the functional residuum of her illness would be really cured. She was much offended, and her solicitors wrote to the insurance company who had asked me to see her, making a most bitter complaint, stating that nothing would induce her to go to a hospital, that I had entirely misjudged her case, and that, whatever subsequent examinations were necessary, nothing would persuade them to allow her to be examined by me. This attitude was explained by the following report, the result of an examination by a prominent specialist, dated four days after my examination:

"This is to certify that I have this day made a special examination of E. R., when I found that she is suffering from a very definite organic disease of the nervous system, and that there is every reason to fear that this condition will prove progressive in spite of treatment, and that she will ultimately become completely incapacitated by the malady, and which will in all probability prove fatal.

"I have advised that in the present state of her health she must on no account undertake any sort of work, neither physical nor mental, as stress and strain of any kind cannot fail to produce a more serious condition of things."

This report was accompanied by a covering letter to a relative, which was as follows:

"The lady who accompanied her will have told you that I take a very serious view of her case, and that she must on no account be allowed to attempt to do any work. The quieter conditions of life that she is able to have, the better, and I hope that at any rate for a time she may be allowed to live in the country."

"I enclose a certificate for you to send to the insurance company, but please on *no* account let your sister see it, as it is fatal to let these patients know the worst; it will gradually dawn upon her without our being brutal and telling her straight out—at any rate at present. Encouragement and kindness is what is wanted to cheer them through their illness."

These were submitted to me for my observations, and I replied expressing my surprise at hearing that the buxom young woman was in a dying condition, and stating that I would postpone any comments I might have to make until after I had a consultation with

the specialist, which the insurance company prudently arranged for.

Some four months later we examined the case together, and my medical confrère took a much more hopeful view of his moribund patient. Shortly, all that he at that time claimed as departures from the normal were—

1. An unhealthy appearance of her hands.

This I freely granted.

2. That she had a weakness on the right side, the proof of which was that, when asked to cross her left leg over her right, she did so easily; but when asked to cross the right leg over the left she did so only with the assistance of her hands.

This I demonstrated to be an hysterical condition, for, on asking her to cross the right leg over the left, at the critical moment I caught hold of both her hands, and she crossed her leg with greater ease and rapidity than she had done with the assistance of both her hands.

3. That she could not stand on her right leg alone.

At the previous examination I had induced her to stand on the fore part of her right foot alone whilst she bent her left knee and I steadied her with my hands; she then could support her weight (10 stone 8 pounds) upon her right, injured limb.

4. That the grasp of the right hand was not as strong as that of the left.

This was so, but it is consistent both with disease and hysteria.

5. Difficulty of speech.

She certainly had a drawling way of speaking, but her friend who accompanied her admitted that it was not always so; and her brother, who took her in the first instance to a London hospital, told the house surgeon that she had always had a peculiarity in her speech.

The diagnosis of incipient bulbar paralysis, which was obviously in the mind of the writer of the doleful epistle, was scarcely consistent with an acute condition commencing three years before, and with the physical signs he enumerated.

I pointed out to the specialist that it was unkind to this young woman (who was only thirty-six years of age) to condemn her to invalidism, which she admitted made her very miserable, when she was in fact able, or could very easily be made able, to do her old work, that of a nursery governess, which is, I understand, nothing more than a superior class of domestic servant. He suggested that she should be treated as a functional case in a hospital, which would enable her to return to her own work. This was the very suggestion which had given so much offence when it came from me. After our conference we re-entered the consulting-room and found the patient in a profound hysterical fit!

I wrote to the insurance company giving an account of my interview and endorsing my former certificate.

The physician in his subsequent report wrote stating that he still thought there "was definite evidence of organic affection of the nervous system, *causing symptoms* of bulbar paralysis." It will be

noted that no allegation was now made that bulbar paralysis was actually present. He advised treatment for a functional condition which he stated was superadded to the above, and stated it was "reasonably possible that it might result in her health being so restored as to permit her taking up some form of light occupation," and that her present condition "was not due to any progressive degeneration of the nerve elements." Finally came the tardy but cheering declaration that "there is no likelihood that it will prove fatal in the way I feared might happen."

The opinion I had formed was that there was, of course, no connection between the paronychia (the original injury) and the spinal caries, and this is the view which was held by the medical men under whose care she was at the hospital, and who saw the case at its early stage. But the insurance company had been advised otherwise, and had paid compensation for many years.

The symptoms were believed to be due to pressure caused by caries, probably tubercular in its nature.

We now insisted on her entering a hospital for treatment of the hysterical condition, but her friends declined unless the following conditions were complied with:

1. That she should have a ward to herself.
2. That she might be removed *at any time* by the advice of her own doctor, and definitely, if after three weeks there was no improvement, she was to be taken from the hospital.
3. That a visit should be permitted by her own doctor when her friends thought fit.
4. That she was to be seen once or twice a week by her friends if they thought it desirable.
5. That the insurance company should pay all hospital charges, and continue her former compensation during the period of her treatment, and thereafter during her incapacity (a stipulation which did not betray either much hope or much confidence).
6. That she should be admitted on a Sunday *afternoon*!

It is obvious that it was anticipated that no hospital would submit to these conditions, and under ordinary circumstances the case would have been refused admission; but I specially arranged that every suggestion, whether reasonable or otherwise, should be met in a conciliatory spirit, and all the obstacles put (I fear intentionally) in the way were frustrated by concession after concession.

Ultimately, when everything was conceded, the young woman point-blank refused to enter the hospital, and the case was settled for £50, a sum which was recorded by the Registrar of a County Court. The application, to which no objection was taken, set out that, "with the exception of slight hysterical symptoms, she had recovered and was fit to resume her ordinary occupation, and the condition of hysteria would gradually disappear in the course of a short time."

Fifty pounds compensated this young woman for an illness from which it was recently feared she would "ultimately become com-

pletely incapacitated," and which would "in all probability become fatal"!

The consultation with the specialist was valuable, but the thorough examination I had made and the confidence it engendered enabled me to present a firm front in circumstances which otherwise would have resulted in great injustice.

It is a matter of great importance to be able to diagnose an hysterical paralysis. I propose, therefore, to discuss a typical case which was demonstrated at the Post-Graduate College:

E. T.—The patient was a girl aged twenty-five. The right foot was the seat of the alleged paralysis. When asked to walk, she put the outer side of her right foot gently on the ground, gradually leaning her weight on it; this was done with the appearance of much effort, and then suddenly at the last moment, when one expected her to put her whole weight on it, the ankle would apparently give way under her, so that her whole weight rested on the outer side of her foot. She then moved forward the left foot a little, and went through the same process again. The elaborate preparation for movement, with the small result, was typical of the hysteric's methods. When asked to sit down and move her toes separately, she did so with a very irregular movement, at one time moving them fairly equally and freely, and at another slowly and with great difficulty. This is very common in hysterical patients, and is brought about by their invariably throwing the opposing muscles into strong contraction; it is typical of functional nerve disease.

When at rest she kept her foot strongly inverted, with the sole drawn upwards and inwards in the position of talipes varus.

What were the conditions for which this might be mistaken? There was no wasting, therefore it could not be a lower neuron affection, such as anterior poliomyelitis; but the absence of wasting would not preclude a hemiplegia. This, however, was negatived by the fact that the face and arm muscles showed no evidence of any muscular paralysis.

The only other alternative was a cerebral monoplegia. In all upper motor neuron diseases there are exaggerated knee-jerks, and on testing these they were found to be exaggerated. Now, the presence of exaggerated knee-jerks is not in my experience pathognomonic of anything, but is a very constant accompaniment of hysteria and neurasthenia, and is, indeed, generally found in those suffering from any form of mental distress. If in this case the exaggerated knee-jerks were of importance, they would be inevitably associated with an

extensor plantar reflex and ankle clonus, both of which were found to be absent. By a process of exclusion, therefore, the condition was clearly one of functional paralysis. In searching for corroboration, irregular patches of anæsthesia were found upon the girl. The palate was not examined, but I have little doubt that, had it been, it would have been found to be anæsthetic.

A useful method of treating hysterical paralysis, say of the arm only, is to *demonstrate* to the patient, by stimulating Erb's points, that the muscles are still alive, and that it is obvious, from the effect of the current, that there is no irreparable paralysis. The patient is convinced of this, for she *sees the muscles move*. When even a slight voluntary movement follows, the progress towards recovery is, as a rule, continuous and marvellously rapid.

A sudden and overpowering emotion, as in the case of the lad reported below, often completely cures an hysterical patient in a moment, but such violent emotional disturbances seldom occur. The tranquil and often sympathetic environment with which hysterics gradually surround themselves is as a rule free from any sudden stress or commotion of any sort. The routine treatment of hysterical paralysis must, as a rule, be by methods systematically applied and laboriously persisted in.

E. S.—A friend told me that when he was house surgeon in the Middlesex Hospital a lad of about fifteen was brought into the hospital. He sat in bed all day, and slept all night with his knees drawn up, and was unable to straighten them. On several occasions he was given an anæsthetic, and the joints at once relaxed, but immediately contracted again on his recovering consciousness. Early one morning my friend was urgently summoned to see the patient who occupied the bed next to the boy's. He had been seized by an acute attack of mania, and was wildly gesticulating with a knife. One nurse was sitting on his chest, and others engaged in attempting to secure the knife. Another patient was in an epileptic fit from sheer fright, and the boy with the useless knee-joints had suddenly jumped out of bed and run downstairs! The interesting point is that the boy was made to live up to it and was cured.

Contractures and Spasms.—These are most commonly seen in the arm, the elbow and wrist joint often being affected. The contractures frequently disappear during sleep, under an anæsthetic, or after the application of an Esmarch bandage.

CHIEF DIFFERENCES BETWEEN NEURASTHENIA AND HYSTERIA.

I think it may be of use to give a résumé of the main differences between the two diseases, more especially as medical witnesses are often asked in the box to differentiate between them, and sometimes find difficulty in doing so.

It cannot be pretended that a case of pure neurasthenia or of pure hysteria is at all usual, inasmuch as the two diseases have sundry features in common. A good many cases present a blend of the two diseases united in various proportions. It is important, however, to decide whether, on the whole, the case is mainly hysterical or mainly neurasthenic, for several reasons. One is that the larger the element of hysteria, generally speaking, the worse is the prognosis; another, that hysterics are people on whose statements no reliance whatever can be placed. Hysteria is, therefore, in my view much more closely allied to malingering than neurasthenia. A third reason is that the treatment of the two diseases is somewhat different, for the hysteric can be treated with wise neglect far more safely than the genuine neurasthenic, who often requires judicious sympathy, much rest, feeding up, and sleep, if he is to be cured.

Hysteria, then, has much in common with neurasthenia on the one hand, and with malingering on the other. All three when associated with traumatism have this in common, that they are more or less curable by settlement of the claim, legal or otherwise.

Neurasthenia is primarily a bankrupt condition of an individual's nervous force, whereas hysteria is a disease of auto-suggestion. Hysteria is largely a disease of the female sex, though among males it is far more common than is generally suspected. Neurasthenia, if not actually predominant in men, is certainly fairly evenly divided between the two sexes.

A man may have the melancholy expression, the mental and physical weakness, the paralysis of will and the self-attention of the neurasthenic combined with the paraplegia or hemiplegia of the hysteric. Similarly, we may have the neurasthenic insomnia, headache and neuralgia, combined with the patches of anæsthesia which are so characteristic of hysteria. The accommodation asthenopia of the one disease may be combined with the retraction of the field of vision of the other. In fact,

generally speaking, it may be said that the signs and symptoms of the two diseases will be found blended in a variety of proportions in the majority of cases.

The more outstanding symptoms are, however, very different in the two diseases. The well-known hysterical seizure or fit has nothing corresponding to it in neurasthenia. A prominent feature of neurasthenia is that the patient becomes easily tired both mentally and physically, whereas the hysteric is capable of prolonged effort, as is shown by the constrained attitudes which she may take up—attitudes involving considerable muscular expenditure—and by her persistence therein. There may be swaying movements for very long periods of time, long enough to exhaust the powers of ordinary persons.

Another important distinction between the diseases is that in hysteria it seems as if many of the peripheral stimuli become largely short-circuited, or have great difficulty in reaching the highest centres. One of the commonest symptoms is loss of feeling, or anæsthesia of a portion of a limb or of a whole limb, or even of half the body. The stimuli applied to the affected regions, although they reach the lower centres, do not get beyond these, and are not actively perceived by, or are void of meaning for, the patient. This applies to the special senses in the same way as the sensations of heat and cold, pain and touch, do to the skin. The hysteric is often deaf. The field of vision is frequently so restricted that, in looking across a room, only the handle on the door or one figure in a picture, for example, will be observed. The stimuli produced by the rays of light emanating from some of the various objects in the room do not get through to the highest centres, and so those objects are not perceived.

Compare this condition with that of the neurasthenic. Here, on the contrary, the patient suffers from a too great permeability of the subconscious centres, so that he not only gets more acute, but more numerous stimuli to his consciousness than the ordinary person. He suffers from hyperæsthesia of various parts of the body, from neuralgias of all sorts—occipital, frontal, intercostal, and so forth. He is acutely sensitive to a too intense light. For him the sounds of the street, the barrel-organ, the bark of a dog, which the ordinary man intent on some task can ignore, are productive of acute torture.

Moreover, as has been said, he is prone to perceive sensory impulses which in the ordinary course should not affect his consciousness, so that often the beating of the heart, the sagging movements of the intestines, and various other activities of the visceral organs (of which normal people are unconscious), become to him a perpetual source of anxiety or annoyance.

Both the paralyses and contractures of hysteria impose further limitations on the stimuli going to the brain of the hysteric. These disorders are the outcome of excessive inhibition of nervous impulses going to or from the Rolandic area of the cortex, and are in strong contrast to the restless, irritable movements, the tapping of the foot on the ground, the constant movements of the hands, and the general jerkiness, so characteristic of the neurasthenic.

Again, the sleeplessness, the vertigo, the various states of anxiety, and the phobias, all of which are so common in neurasthenia, are seldom and but little represented in hysteria. Finally, as has been mentioned above, the mental attitude of the two diseases is entirely different; for while the hysteric is, to put it mildly, a victim of self-deception, deceiving others in turn, the neurasthenic is only too painfully meticulous to convey to you what he considers an accurate and *truthful* estimate of the multifarious sensations from which he is suffering.

Malingering is a conscious effort to deceive others only. Hysteria is subconscious malingering, which always commences with self-deception.

POINTS WHICH ARE COMMON TO MALINGERING AND HYSTERIA.

First, in both conditions the symptoms are very variable, probably differing every time the patient is seen; second, they are all functional in character; third, there is an absence of any anatomical basis; fourth, the hysteric almost always reacts to tests in exactly the same way as the malingerer. If, for example, the complaint is loss of sight of one eye, the hysteric will, in every test designed to show that both eyes are capable of sight, react in exactly the same way as the malingerer. His contractures and his paralyses, like those of the malingerer, disappear under chloroform. How, then, are

we to differentiate the cases? Before coming to the opinion that the case is one of malingering, the possibility of hysteria should always be kept in mind, and search should be made for the presence of other stigmata of hysteria, such as have been described above. Take, for example, the case of an hysterical woman who says she cannot see out of one eye. She will readily react to every test (such as the use of prisms, the binocular test, the coloured-glass test, and all the others described in the chapter devoted to the simulation of eye diseases) in the same way as the malingerer would, but with this important difference: the hysteric, believing herself genuinely blind in one eye, will answer the tests without any hesitation, without contradicting herself, and is easily caught out every time; whereas the malingerer, knowing that she can really see, will react to some tests and not to others, will contradict herself, will be suspicious in her manner, and her behaviour will be very different from that of the hysterical patient.

In some cases of hysteria many of the symptoms would be readily terminated if the patient were younger and could be subjected to the rational punitive methods of the nursery.

Now, as this is a disease which is essentially one of suggestion, it seems hard that an insurance company should have to pay if the claimant who has been injured has continuing incapacity suggested to her—I care not whether by her lawyer, her doctor, or herself. More especially if, as the result of the insurance policy, she is placed in a position in which it is a distinct advantage to continue to allege illness.

The following case shows how intimate and how delicate the connection between hysteria and a fraudulent claim for damages may be, and how fine is the line that may separate them.

B. P.—I was asked by an insurance company to examine and report on the case of a girl who was said to be totally incapacitated for her work in consequence of her hand having been bitten by a dog five and a half months previously.

Examination.—The wound had healed in due course. The girl's self-control was obviously affected, and she was suffering from marked hysteria. Physical examination of the reflexes, and the usual tests for nerve disease, revealed no sign of organic complaint. The case was not one of traumatic neurasthenia, but of hysteria. I considered that she was not consciously exaggerating her condition, but that the happening of the accident, and subsequent apprehension of evil

consequences (such as hydrophobia), had brought about that loss of self-control which is well known to be the main feature of hysteria.

As her relations evidently did not in the least understand the appropriate treatment for her condition—*i.e.*, firmness, reassurance, and an apparent lack of sympathy—and in her then environment she was never likely to get well, I induced her to enter a hospital for nervous diseases. After an appropriate course of treatment, she was discharged cured, and at my suggestion went to a convalescent home for a fortnight. The insurance company paid for both the hospital and convalescent home treatment.

Four months later she was sent to me again, her statement being that, as soon as she began to work, the hand swelled up and became "black." I found the hand enveloped in ointment, lint, plaster, bandages, and a sling, and it was only upon my assuring her that I would take full responsibility for my action that she was persuaded to allow me to remove the dressing. The hand, when bared, proved to be in the perfectly normal condition in which it had been when I examined it first! She flinched when it was touched, but firm pressure was applied unnoticed when she was engaged in conversation.

The hospital surgeon under whose care she had been agreed that she was fit for work. Although there were suspicious elements in the case, the want of balance, which is associated with hysteria, accounted to some extent for (what amounted to) her delusion that she could not work. An X-ray photograph was taken, which proved there was no local cause for disability; and the fact was that, so far as the dog-bite was concerned, she had no physical basis for her incapacity for work. Surely a firm attitude on the part of the family doctor, who had been attending her regularly, would have really been the truest kindness.

Result.—Four and a half months later a County Court Judge terminated the compensation as from the date, eight months before, on which I had first reported that she was well.

When a claimant neither expects nor desires to get well, has evidently an intuitive knowledge of the methods of malingering, and openly expresses strong views about the liability of his employers, the condition is psychic, not physical. Many of these claimants absolutely deny receiving assistance from more than one club, and it requires considerable fortitude and not a little knowledge of human nature to wring from them the admission that they are in receipt of what to them are considerable sums of money.

Instead of again becoming useful members of society, they acquire by irregular and loafing habits a mental outlook which renders them incapable of doing an honest day's work; and it

follows that, in order to retain compensation, they exaggerate such symptoms as do exist, and attempt to introduce others which have no bodily basis whatever. Most of the alleged symptoms in these cases are subjective, and one has to depend solely on the patient's statements; and no one knows better than the malingerer how difficult is the position of the medical examiner when he has to found his disbelief in the existence of disease on grounds other than those of his own observation.

A large number of alleged illnesses in such cases practically amount to deliberate frauds. Often one is only prevented from reporting such cases as deliberate malingering because one believes that the combination of circumstances has so influenced the patient, consciously or unconsciously, that in the end he *cannot* exercise his will-power.

The boundary between wilful imposture on the one hand and the more or less involuntary imposture of hysteria on the other is exceedingly difficult to determine. Too often claimants seem to suffer not so much from the effect of the accident as from the memory of it. These cases are constantly labelled in the Law Courts "traumatic neurasthenia." They are, in truth, nothing more nor less than cases of hysteria, where the claimant is on the lookout for morbid sensations, and has welcomed them rather than made any attempt to ignore and suppress them. The whole burden of his complaint lies in what he *feels* and what his sensations are, the truth being he is so demoralized by idleness that he is in reality determined he shall not work.

History.—B. V.—The following is the case of a man said to be suffering from traumatic neurasthenia as the result of a fracture of the left arm and a cut on the temple received some years previously. He had obtained an award in his favour in the County Court under the Workmen's Compensation Act. It will be noticed that this examination, instead of being a strictly medical one, degenerated into a battle between us to see how far he could deceive me.

Examination.—His complaints, dealing with them categorically, were as follows:

1. Pain in the upper part of his back, extending over his head to his temples.

This being an entirely subjective symptom, in the absence of any physical sign, one was dependent upon his truthfulness; but, from the anatomical distribution of the nerves in this region, its existence as alleged was extremely improbable.

When the battery was applied to his back, he said at first that the current was so intense that it seemed to be "tearing his flesh off," when, in fact, no current was running. Later he discovered what had taken place, for he said he felt nothing, which was correct, seeing that the current had been switched off.

2. He complained that he could not see so well as before the accident, and that the lines of print ran into one another when he tried to read.

Having taken with me test-types and lenses, a thorough examination was made of his vision. A certain amount of long-sightedness was present—a condition which in no way interfered with his ability to work, was wholly unconnected with the accident, and had, indeed, been present since birth. Covering his right eye, a certain-sized letter was placed at a measured distance in front of him; this he said he was unable to read with the left eye. When, however, two lenses were placed in front of this eye, he said he could read the letter correctly with their aid, and did so. Now, these two lenses were "plus one" and "minus one," and as they neutralized each other he was, in fact, looking through plain glass, and had, therefore, intentionally attempted to deceive me.

3. He said that, although he could now move the left arm (which had been fractured) freely, he could not yet raise it properly above his head.

When asked to show me how far he could raise the arm, he placed it at a right angle with his body; subsequently, when asked to show me again, he raised it to *less than* a right angle; and on a third occasion, when asked to do the same thing, he raised it to considerably *more than* a right angle. He was asked to place both hands lightly on the back of a chair, and, whilst a pretext was made of examining his back, was induced to step back from the chair, his hands still resting lightly upon it, until his back was almost on a level with his outstretched arms. When asked if he felt pain anywhere, he replied that he did not. He did not observe that he had, in fact, raised his arms high above his head, because he had done so in a horizontal instead of the usual vertical position (see p. 299).

4. He said he had lost the power of grip in the left hand.

Owing to want of use, the whole of the left arm was somewhat smaller than the other. When he was asked to bend his elbow whilst I resisted the movement, it was obvious, on feeling the biceps muscle, that he was not bringing it into use. When asked to make certain movements which necessarily entailed tightening, and consequently hardening, certain muscles, he voluntarily avoided bringing these muscles into play. The arm was a perfectly useful one.

5. He complained of giddiness, and that when he went out of doors he felt "as if his heart would stop."

He was caused to stoop frequently for considerable periods during the examination, without eliciting any complaint of giddiness. Nor did he complain of giddiness or of his heart when I took him out of doors and made him walk with me. The heart and kidneys were

perfectly healthy; the pulse and tongue also were normal. During the examination, he repeatedly caught hold of any chair or table near; but when these articles were removed from him, he stood firmly without their aid.

This man had been medically examined on many occasions, and had therefore been previously subjected to Romberg's test, which consists in trying if the patient can stand steady, with heels and toes together and eyes shut. When asked to do this, he immediately lurched forward in an obviously assumed manner. I stepped aside, telling him he would be allowed to fall, and on each repetition of the test he fell forward in a lesser degree. When his attention was directed away from this test, and his eyes were at first closed in order to test their contractibility (Argyll-Robertson pupil), I took the precaution of seeing that he stood with heels and toes together, as in the previous experiment. This time there was no tendency to fall.

He told me that, at the hospital he had last attended, the doctor told him he "could do nothing for him"—a somewhat significant statement.

This sturdy, well-nourished, though somewhat flabby man was not a traumatic neurasthenic, but one of those deliberate malingerers who, having had a genuine illness, had become work-shy and lazy, and was rapidly developing into a confirmed loafer.

Result.—Acting on my advice, the insurance company made immediate application to the Court to stop the weekly allowance under the Act. Two months later I gave evidence in Court, and the Judge ordered termination of the award on payment of £15.

TREATMENT BY ISOLATION, ETC.

For the proper treatment of neurasthenia, hysteria, and malingering, in traumatic cases, *residence in hospital* with massage, etc., is often essential.

The following notes are based upon 100 consecutive cases of neurasthenia which, during the last seven years, I have been successful in inducing to submit to the modified Weir Mitchell treatment.

From the table given on p. 194 it will be seen that, out of 100 cases treated in hospital, no less than 72 were completely cured. Of the remainder, 7 were improved, 4 left the hospital of their own accord, and in 17 only was the treatment a failure.

Most of these cases have been sent to me for examination and report either in my position as medical examiner for two large public bodies, or as consulting medical officer to the Shipping Federation and various insurance companies.

Neurasthenics always lose much weight. I have not been able to get a complete record of the weights in all these cases, but, of the 66 cases in which the weight has been recorded, 55 gained weight; the gain varied from a few ounces to 12½ pounds, and the average was 4 pounds 3 ounces.

SYNOPSIS OF ONE HUNDRED CONSECUTIVE CASES OF NEURASTHENIA.

	Total.	Cured.	Improved.	Failure.	Left Hospital without Permission.	Average Number of Days Absent from Work before entering Hospital.	Average Number of Days' Treatment in Hospital.
I. Neurasthenia (Traumatic)	32	17	4	8	3	465	61
II. Neurasthenia (Non-Traumatic)	57	49	3	4	1	39	40
III. Malingering (all accidents except one)	11	6	—	5	—	434	60

Of the traumatic neurasthenics, there were nine in which there was a strong suspicion, perhaps more than a suspicion, of guile; nevertheless at the time when they were sent to the hospital for treatment they were hopeless cases from the point of view of work. In every case my suspicions were justified. It is interesting to note that, taking these nine cases by themselves, the *average* duration of absence from work before entering the hospital was no less than 663 days, the average number of days' treatment in hospital was 64. Of these cases, two resumed work at once after leaving, with the help of a little persuasion; three resumed work after Court proceedings, three after a sum in settlement, and one *after* receiving a pension. The average number of days of absence from work prior to entering the hospital in these cases is somewhat striking, being close on two years; but this high average was due to the fact that two of the cases had been on the sick-list for nearly five years, one for three years, and one for nearly two ears. There is often a very marked contrast between the

length of time the disability lasted prior to examination and report, and the comparatively short time in which they were restored to health after institutional treatment.

Taking the 100 cases *as a whole*, it will be seen that, although the average number of days of absence per case before entering the hospital amounted to 219, the average number of days' treatment in hospital was 49, and of the 100 cases no less than 72 were cured.

One important point with regard to institutional treatment of neurasthenia is that, where possible, the patient should contribute some portion, at least, of the cost of maintaining him in the institution. This enlists his active co-operation in the cure.

Neurasthenia is a disease which usually proves very expensive to everyone, and I am confident that even if the employer or the insurance company has to defray the hospital charges it is a good investment. In non-traumatic cases I have in some instances arranged that, on return to work, half-time should be allowed for the first week, and the amount of work per day gradually increased subsequently, until full work is accomplished. Unfortunately, in traumatic cases this is not practicable, for very obvious reasons, connected not only with the labour market, but with the mental attitude of the injured person.

I find success is more likely to be assured by sending a patient straight to work, after an interval of but a few days. In the public hospital where most of my cases of this character are treated, proper physical exercises and the gradual hardening process forms part of the treatment.

There is no doubt that a large number of these cases are mixed up with conscious or unconscious exaggeration, and sometimes with fraud; but when a man is genuinely ill, and is also exaggerating, the correct treatment—indeed, the only humane treatment—is to first deal with the underlying genuine complaint.

In addition to the 100 cases enumerated, I had nine cases, which I originally diagnosed as neurasthenia, which turned out to be cases of true mental derangement. Neurasthenia is not in any sense the initial stage, or a phase, of insanity, but there can be no question that to diagnose between incipient

insanity and well-marked neurasthenia is sometimes almost insuperably difficult. The nine cases were, after the facilities for close observation which residence in a hospital affords, found to be mentally unhinged, and not suffering, as I thought, from neurasthenia. I think, however, I may be pardoned these errors.

I well remember a case which came under my care when I was in general practice; it was that of a highly-strung lady who called upon me almost every morning and declared she was sure she was going out of her mind. I called in consultation a well-known neurologist, who was very emphatic, upon my raising the point, that she was not suicidal. A few weeks later I had to withdraw from the case, as she and her friends declined to follow out my treatment. Not long afterwards she cut her throat, from ear to ear, with an ordinary table knife.

History.—B. Q., a carman, aged fifty-one, brought an action against a public body to recover damages in respect of personal injuries sustained in consequence of a collision between an electric tramcar and the van he was driving. It was alleged that the plaintiff's injuries consisted of an incised wound of the scalp and severe bruising of the body, particularly the small of the back, resulting in progressive ascending degeneration of the spinal cord, and severe shock.

Examination.—Four months after the accident I was asked to visit the plaintiff and examine him in the presence of his own medical attendant, in conjunction with a medical man who had already seen him on behalf of the tramway authority.

His chief complaint was of pain across the back, and of some loss of power in all the lower part of the body.

He was confined to bed. Early in the examination I removed the bedclothes and asked him to stand on the floor, watching him closely. He turned on his face, and with a pushing, shuffling movement got on his feet with much alacrity. When asked to come forward into the middle of the room, he rapidly did so with a shuffling gait, his whole body assuming a peculiar dancing movement, similar to that which would probably be assumed if one were compelled to walk barefoot on hot bricks.

The usual tests revealed no organic disease of the nervous system. The spine was tender. He had proper co-ordination of all his muscles when his mind was directed from the fact that the muscles were being tested. He was well developed, with no muscular wasting.

There were patches of anæsthesia at different spots on his legs. He said he felt no sensation, even when deeply pricked with a sharp pin, but at other times stated very definitely that he did feel the pin when after an interval it was applied over exactly the same area.

With both legs and thighs bared, and his legs supported whilst he sat on a chair, he was asked to close his eyes, and say "Yes" when he felt the pin prick him, and "No" when he did not. Both legs were pricked at first alternately, and he invariably said "Yes" when the pin was applied to the skin of the left leg, and "No" when it was applied to his right! In case it might be contended in subsequent Court proceedings that this was an accident, he was pricked two or three times successively on the right leg only, and on each occasion he said "No."

Some years ago I should have said that such a man was a deliberate malingerer, but experience has shown me that this view would be erroneous. In the first place, he was an exceptionally good type of working-man, industrious and able-bodied, and evidently anxious to recover. He and his wife were obviously respectable people. But he was unfortunate in his surroundings; his doctors had admittedly not appreciated the functional character of the case.

This man genuinely believed he was "paralyzed from his spine downwards"; having been strong and healthy before the accident, and having subsequently convinced himself that paralysis was his portion, he had not unnaturally abandoned hope, and was now the victim of hysteria. He and his wife appeared to be genuinely relieved when I told him he would be all right soon. His case was not a difficult one to cure; he required to leave his then surroundings, and to be gradually and judiciously led out of his erroneous beliefs.

Result.—A sum of money was paid into Court, and this was accepted in full settlement of the claim.

A month after my examination he was admitted to a metropolitan hospital, and discharged four weeks later, much better after massage and ward work. A fortnight later he was sent to a convalescent home for three weeks. He returned cured.

Four months after his return from the convalescent home, on personal inquiry at his house I found that he was out. It appeared that three months previously he had started looking for work as a coalheaver!

Patients in hospital get thorough massage, and are, moreover, all the time subjected to the massive suggestion afforded by the hospital atmosphere and an environment of discipline; they consequently progress towards recovery.

The following case is illustrative of the value of this procedure:

B. W. was engaged in a branch of the public service to which was attached a liberal pension. Seven years previously he had been off work for a whole year, suffering from a strained back, received full wages and the use of a cottage. On this occasion, having been off work nine months with his back (again said to be strained), he was sent for examination with a view to superannuation. I sent him to

hospital for observation. After eleven days he was told he would be reported as a malingerer and lose his pension if he did not immediately resume work. He left hospital and resumed work next day.

The following is the case of a deliberate malingerer who yielded on being watched in hospital:

B. X., a seaman, when sent to me for examination, had been in receipt of compensation for nineteen months in respect of an injury to his back and shoulder caused by a piece of stone having struck his head and shoulder. For some time he was certified by the local medical examiner of the shipping company to be suffering from traumatic neurasthenia.

Examination.—This was a somewhat unusual case. The claimant, a short man, with a short circular beard and a smiling, not over-intelligent face, walked with his back at an angle of about 45 degrees, bent his body to the left side, turned in his left leg, and supported himself with a stick.

He smiled during the whole examination, and from first to last, even when straightened out, he never showed even a passing evidence of pain, judging from his facial expression.

The nervous reflexes were all normal, save exaggerated knee-jerks, and his heart, lungs, and liver showed no signs of disease. He weighed 10 stone stripped, his muscles being well developed. When asked to lie on the floor, he lay in a hunched-up condition, with a beaming, benevolent expression. Gradually, as I insisted upon his straightening his back and putting his legs in a line with his body, he relaxed his muscles, and eventually was persuaded to lie quite straight. The moment he got up, however, he assumed the old deformed appearance, practically that of a hunchback. However, when suspended from a trapeze, he was induced, with a little persuasion, to hang absolutely straight.

There being no question, after examination, of this claimant having any nerve disease, obscure or otherwise, one had to decide whether this was a case of purely functional neurosis or deliberate malingering.

In spite of the fact that he repeatedly told me that the electric current produced intense pain over his sacrum when the current was cut off, although the battery remained in noisy action, I was of opinion that a long period of idleness, probably many medical examinations, and a clear recognition of the fact that he could live on land on half-wages without working, had all combined to make him believe to a certain extent that he must assume the grotesque, contorted appearance he presented.

The case being an eminently curable one, I advised that he be admitted to a hospital where the functional element in his case would be recognized, and where he would be gradually led out of his morbid mentality.

His mental attitude was demonstrated by the fact that, when asked if he wanted to be cured, he agreed; but, when told that I knew a man

who could cure him, he had not even the passing curiosity to ask who he was or how it could be done. In order to test him, after the interview I dismissed him, and it was only when I called him back, and asked him whether he would agree to my taking steps to promote his recovery, that he agreed to enter an institution—provided there was no “slaughtering” done! It was pointed out to him that in any hospital recommended for his case no semblance of an operation would even be suggested.

Result.—After a short period of hospital treatment, he held his back quite straight, made no complaints, and stated definitely that he was prepared to return to sea, and it was arranged that on leaving the hospital he should be sent straight to his ship. This was done.

The interesting fact leaked out that, at the time he was sent for by the hospital authorities, he was at work in the hop-gardens!

In Chapter XXV. is detailed at length a case illustrating not merely the advantages, but the absolute necessity, of residence in hospital if a cure is to be obtained.

Functional Neuroses in Germany.—In conclusion, reference may be made to the views held on the Continent regarding these questions.

Germany, by means of invalidity insurance and other schemes, pays those of her workers who suffer in the stress of industry, *but a very strict watch* is kept upon the *treatment*. They are *compelled*, if so desired, to enter a hospital for observation.

Notwithstanding this, according to Ewald,* it appears that there are in Germany an “immense number of nervous workmen, lacking in energy, in whom the thought of compensation has become a fixed idea.” My experience is that this obsession is not confined to our Teutonic neighbours. It is obvious that in that country, where 20,000,000 inhabitants are affected by the Compensation Laws, experience of the effect of these laws on the working-classes must be very large. It is not surprising to find that in Germany exaggerated claims and simulation are causing a good deal of anxiety to those who administer these laws, and that there is an agitation for some alteration of the existing enactments.

The German Courts recognize that predisposing causes influence the results of traumatism, and it is held that the effect

* “Traumatic Neuroses and the Accident Laws” (*Die traumatischen Neurosen und die Unfallgesetzgebung*), Ewald, *Beiheft zur Med. Klinik*, 1908, H. 12. Urban and Schwarzenberg, Wien. M. 1).

on the nervous system must bear some proportion to the nature of the accident; and the time must come when, even in this country, special attention will have to be paid to the question of how far trauma is merely an exciting factor of predisposing conditions, and whether disability following traumatism is mainly due to organic changes or the defective neuro-mental equipment of the patient.

Functional Neuroses in France.—The same problem confronts the authorities in France.

A. Brissaud, in the French *Journal of Neurology*, describes a condition which he states is one of the unexpected effects of the French Accident Law of 1898. It is described as a new disease, to which he has given the name of "sinistrosis." He describes it as a "psychical accident," caused by the fixed idea, which takes possession of the injured workman, that every accident occurring in the course of work constitutes a damage admitting of indemnity. The Fourth Chamber of the Tribunal non-suited a plaintiff workman on the ground that: "the incapacity with which the workman in this case seems to be affected results not from the accident, but from the erroneous opinion which the injured man formed of the rights to which he was entitled, by persuading himself that an income was necessarily due to him. In these circumstances, he is not entitled to ask for the allocation of an allowance."

If the above judgment is jurisprudence, a contemporary naïvely remarks, there is reason to hope that sinistrosis will find in it the curative treatment that doctors have, until now, been unable to discover.

Brissaud claims that the preoccupation of the patient in still feeling his imaginary pains has become an obsession, and is in reality a disease.

This condition has nothing to do with traumatic hysteria. It is produced by neither physical nor mental shock. It is an obsession which starts from a different point, and has as its basis the fixed idea that every accident in course of work constitutes damage which necessitates indemnity.

The difficulty of endeavouring to make an exact classification in cases of this character is much enhanced by the fact that the necessary investigations into the disability alleged, entailing as they do repeated examinations and rehearsals of

the details of the accident, revivify in a more or less mild form some of the mental phases of the shock, and thereby tend to accentuate any ill effects which were induced by the original accident.

Every examination and every recollection brings further injury to the nervous system and the mind, causing, as Ewald expresses it, a "summation of excitements which has a prolonged effect and finds its expression in neurosis."

The people referred to by Brissaud have a temperament which is highly strung and neurotic, and think that, having narrowly escaped from injury or from death, they should receive recompense in proportion to the injury threatened and the fright entailed thereby, and not merely for the tangible bodily injury received.

More decisions in this country on the lines of the Fourth Chamber of the French Tribunal would not only cure existing cases, but would effectually prevent the occurrence of similar claims in the future.

To sum up, in a large proportion of cases of alleged disability, the difficulty is to determine how much of the condition is due to the effect of trauma and shock, and how much to a faulty nervous system or a perverted mental outlook. Still more important is it to determine how much is the result of conscious or unconscious abandonment of self-restraint, together with a dim, half-recognized appreciation of the supposed material benefits of continuing disability. These are some of the most thorny problems of medical jurisprudence. Many cases are effectively dealt with by a combination of firmness and consideration, and the true solution will in some cases only become apparent during the course of persevering treatment, the essential features of which are change of environment, substitution of healthy for unhealthy suggestion, and the provision of adequate stimulus to return to work.

In Mott's admirable Lettesonian lectures (1916) on the Effects of High Explosives upon the Central Nervous System, in dealing with the treatment of that condition, he dismisses the treatment in a few sentences. His sole recommendations are—To look after the comfort and welfare of the patient on common-sense lines; the use of hot and cold baths, especially the former, to soothe and induce sleep; the diversion of the mind by healthy

indoor and outdoor amusements. He specially emphasizes the value of music, and the use of those who have recovered as object lessons.

Those who know anything of these cases will appreciate the value of this sound advice. Unfortunately, the busybodies of the medical profession are not content to let Nature work out her own salvation. The following is a note which I received from a doctor to whom I had sent, not without some misgiving, a patient with a very mild form of neurasthenia, produced by nothing more serious than a check to his ambition:

“He drank the thermal water activated with added radium; had the incandescent light followed by the static wave to the spine and foot, and some packs of mustard bran over the liver and stomach; and I gave him a purin-free dietary. I also made applications of the electric cautery over the cervical ganglia of the sympathetics.”

I stopped this nonsensical treatment, and sent the patient back to work, which he has done continuously and well ever since.

CHAPTER VIII

EXAMINATION OF THE EYE*

ALLEGED total or partial blindness is not so difficult to detect as might at first sight be imagined. The pupil of an eye which is sightless does not contract to the smallest degree when a strong light is suddenly flashed on it. It must not, however, be forgotten that a pupil will react if even feeble vision still remains, but the persistence of a well-marked light reflex in an eye alleged to be nearly blind should make one suspicious of malingering.

The routine of the examination of the eyes in relation to the nervous system, and kindred matters, is fully dealt with at p. 109 *et seq.*

Test-Types.—In testing for lack of visual acuity, it is obviously unwise to depend upon one set only of Snellen's or other test-types. The examiner should be in possession of a number of cards with different lettering, as patients get to know the letters and their position in any one card.

A useful plan is to have each line of Snellen's test-types printed on a separate slip of cardboard; these can be arranged in various positions on a frame by a simple arrangement of slots. Or a test-card should be arranged to commence with two lines of $\frac{6}{36}$, followed by two of $\frac{6}{24}$, three of $\frac{6}{18}$, and so on. This will be found very useful in detecting the simulator who pretends he cannot read lower than a certain line on the test-card.

Snellen's test-types should never be varnished, for the light renders them invisible at some angles, and when the varnish

* The larger part of this chapter was written for the Army Medical Department of the War Office, and was distributed in the form of a pamphlet to the Medical Examiners of Recruits in 1916.

fades they become yellow and the black letters do not stand out sufficiently.

The artless individual who alleges either total blindness, or grossly exaggerates an existing defect, is not so difficult to expose as he thinks, but those who are well informed and cunning often require the services of those who have specialized in ophthalmology.

Intelligent malingerers are well aware of the difficulty of detecting alleged blindness which is unaccompanied by physical change.

Many men who complain of defective vision do not persist in their complaint when they appreciate that they are being examined in a way which will probably lead to detection, and it is believed that in many cases only one of the following tests may be necessary.

The experiments are arranged in the order of their simplicity and their applicability.

The apparatus required for the various tests is of a very simple and inexpensive nature.

It is assumed in all these experiments that care is taken that the patient does not succeed under any pretext in closing either eye momentarily.

TESTS FOR SIMULATED PARTIAL BLINDNESS. \

I. This test may be used for the discovery of a fraudulent allegation of defective vision in one eye, short of simulated blindness.

It depends upon two facts: first, if both eyes are open, it is impossible to tell with which one sees an object, and, second, anything coloured red cannot be distinguished as red if seen through a red glass by *reflected* light. If, for instance, half of the letter W is printed in red and half in black, it will be read as V through a red glass.

The following procedure is suggested:

The examinee should first be tested in the ordinary way by Snellen's test-types, and the visual acuity noted. Suppose he reads $\frac{6}{6}$ with the left and $\frac{6}{36}$ with the right eye. He should then be brought 2 feet nearer the test-type, his back momentarily turned, and the card with two-coloured letters sub-

4 O I

4 H B

8 R Q

4 M K O

FIG. 5.—TEST CARD WITH TWO COLOURED LETTERS.

[To face p. 205.]

stituted for that of Snellen. This test should not be applied in a very bright light (either day or artificial). He is fitted with a trial spectacle frame with a red glass for one eye and green glass for the other, the green glass in this case being placed in front of the right eye, and the red glass in front of the sound (left) eye. He is *then* told to turn round and read with both eyes off-hand as far down the card as he can, commencing at the largest letter. If he now reads the red portions of letters of any line below $\frac{6}{36}$, he is of course doing so with the eye he alleged to be defective, and the lower down he reads the better he proves the vision in his right eye to be. For instance, if he reads 40 as 40 and not as 1 C, and L as L and not as I (see letters facing this page), he must have read these with his right eye, as the red portions of these letters were invisible to the left eye.

When the card has been once seen by the patient, he must *never* be allowed to look at it again without the coloured lenses in front of his eyes. If this is permitted, even momentarily, the whole procedure will be unsuccessful. When made to face the card, it should be insisted that he reads the table at once, otherwise he may observe a lustre in the red portions, which would arouse his suspicion.

An honest man always answers promptly, if sometimes erroneously, and this may very well happen if he has astigmatism. But the simulant wants a longer time; he hesitates, and sometimes takes ten to fifteen seconds before he will answer.

The fact that the arrangement of glasses and colours on the card compels the patient to read different letters with each eye separately, is of much value in another way, for by it an ocular demonstration of the attempted fraud can be made to third parties.

It is well to remember that many persons have not a good binocular fixation, and where this disability exists the test is not perfectly applicable. It is a good plan, if this is suspected, to pass the hand momentarily (accidentally as it were) over the eye with the red glass, thus giving the patient an opportunity of seeing in the first instance the entire characters through the green lens. It is obvious that this does not destroy the value of the subsequent testing, but merely

assists the patient at the outset in his binocular fixation (Haselberg).

II. If it is suspected that an alleged inability to read anything but the large letters of Snellen's test-types is not genuine, the following experiment is helpful:

The patient is placed 20 feet away from a looking-glass, in front of which is placed a card with Snellen's test-types. He is instructed to indicate the line beyond which he can no longer read the letters. The card is removed from the mirror, and he is told to stand 10 feet nearer the mirror. A test-type card with letters of the same size, but printed *backwards*, is placed in his hands and held in front of his chest as he faces the glass. He is now told to read the letters which he sees reflected on the mirror. As he is now standing at half the distance from the mirror that he was in the first place (should he be ignorant of the laws of reflection), he may be induced to read double the number of lines he read in the first instance.

III. Simulated defective vision may be demonstrated as follows:

Render the sound eye artificially myopic by placing in front of it a convex glass of 5 D. Assuming the eye is emmetropic, its far point is now about 20 centimetres (8 inches) distant, and with this eye he cannot read fine print farther away. He is asked at first to read with both eyes at quite a short distance, and now, if the print is gradually withdrawn considerably farther than 20 centimetres, and he continues to read aloud, it is apparent that he is reading with the alleged defective eye, which he brought into use when the artificially myopic one was put out of range by the withdrawal of the book (Duane).

IV. The same test may be applied for distant vision, as follows:

The patient is placed 20 feet from Snellen's test-types. A trial frame is used containing a plain glass in front of the eye said to be blind or defective, and a convex 8 D in front of the sound eye. He is at once urged to read with both eyes. If he succeeds in doing so, it is with the eye which has been declared to be defective.

Before putting the strong convex lens in front of the sound eye, it is well first to **disarm** suspicion by placing a series of very weak concave lenses in front of the eye.

V. Whilst the patient is reading aloud, a prism of 4° with its base downwards is placed in front of the alleged defective eye. If the vision in that eye is really poor, the presence of the prism will make little or no difference, and he will read on as before. On the other hand, if he sees fairly well with this eye, the presence of the prism will produce superimposed double images, consequent confusion, and an involuntary pause in his reading (Duane).

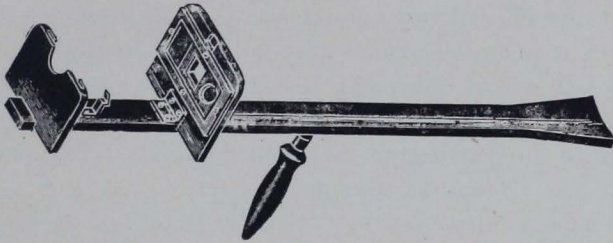


FIG. 6.

VI. Bishop Harman's diaphragm test consists of a flat ruler 18 inches long. At one end is a piece of wood called the carrier, set at right angles, on which is placed a small card with letters or numbers. Five inches from the carrier there is a small vertical screen, which is pierced by a hole three-quarters of an inch in diameter.

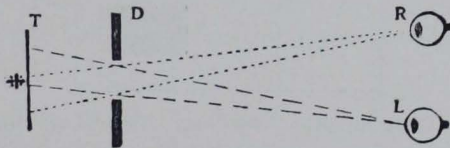


FIG. 7.—THE PATHS OF VISION.

T = Test-card ; D = screen with hole.

The apparatus is used by placing the end opposite the carrier immediately below the nose, on the upper lip, asking the patient to read the letters through the hole in the screen. The application of the test depends on two facts:

1. That one cannot perceive with which of his two eyes he is seeing if both eyes are kept open.
2. That objects on the right-hand side are seen by the left eye, and those on the left by the right eye.

A small card with the following letters or numbers

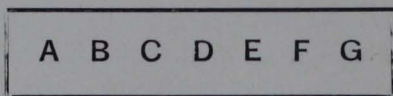


FIG. 8.

is placed upon the carrier, and the patient is instructed to read through the hole. If the patient only reads D E F G, it is obvious that his right eye is defective; whereas if he only reads A B C D, it is equally clear that he is only using his right eye, and his left eye is defective, for, as is well known, the visual axis crosses. It is impossible for a malingerer, if he does not understand the instrument, to succeed in pitting his wits against those of the medical examiner.

The visual acuity may be tested by letters of different sizes.

Test-cards of infinite variety may be used, showing printed matter, figures, paired capitals, etc. For the use of children, representations of well-known objects such as cats, dogs, birds, are provided. One very simple device consists of a card on which two small oblongs are printed, one oblong on the right,

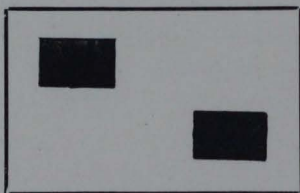


FIG. 9.—ARRANGEMENT OF TEST-CARD WITH COLOURED OBLONGS.

and the other on the left (Fig. 9). The oblongs are of different colours—a red and a green oblong on one card, for instance, and a blue and a yellow oblong on another. The cards are reversible, so that when fitted in the carrier, either a red or a green oblong may be uppermost, or on the left or right, as the examiner desires. Additional cards with black oblongs are provided for the use of colour-blind people.

The instrument readily lends itself to variations of the primary experiment, some being of a more subtle character, suitable for the requirements of ophthalmic practice; but the above-

described test is sufficient for the everyday needs of the medico-legal expert, because it is impossible for any malingerer to successfully evade a thorough application of it.

Fraudulent Use of Atropine and Eserine.—The possibility of the fraudulent use of atropine has to be borne in mind. Where the pupil is widely dilated and fixed, and conjunctival injection is present, the condition is suggestive of the recent use of a mydriatic. The astute malingerer, however, applies atropine a day or two before the examination, when the pupil will be sluggish and only partially dilated.

Its use is not unknown in compensation cases. Atropine may be used to dilate the pupil in simulated epilepsy, but the duration of the paralysis of accommodation and dilatation of the pupil would, if the patient be kept under observation, clear away any doubt.

Conceivably eserine, or pilocarpine, might, with a similarly fraudulent object, be instilled into the eye prior to medical examination for the purpose of contracting the pupil. It must never be forgotten that, although comparatively rare, in a small number of cases the examinee may have the morphia habit.

The convalescent period of head injuries has been known to be indefinitely postponed by the natural anxiety of the medical attendant on finding a slightly dilated pupil, the result of the judicious introduction of a small quantity of atropine !

Squint.—An eye which has long been completely blind generally squints. If, therefore, it is alleged that a squinting eye has become blind recently and suddenly, the presumption is against the truth of the allegation.

TESTS FOR SIMULATED TOTAL BLINDNESS OF ONE EYE.

Blind Eyes.—A blind eye, as a rule, deviates when the sound eye is fixed ; but this is by no means an absolute rule, depending as it does upon how long the two eyes had acted in unison before one became sightless.

A blind eye has its pupil dilated as a rule. The dilatation is always somewhat less than that produced by atropine. The

pupil may be bound down by old-standing synechiæ. If a patient is blind in both eyes, the pupils are, as a rule, inordinately dilated.

A fixed dilated pupil (apart from the use of atropine) suggests rather organic than functional blindness. A pupil which remains motionless when exposed to bright light, but contracts under the influence of convergence and accommodation, points to the probability of unilateral blindness.

VII. Haselberg's test (No. I.) may be used for demonstrating simulation of total blindness of one eye. (See description of test on p. 204.)

VIII. The patient's name should be incorrectly spelt with a red crayon on white paper, the pencil being pressed lightly on the paper. A trial spectacle frame is put on the face; it should have a green eyepiece in front of the alleged blind eye, and a red eyepiece in front of the sound eye. The patient is then asked if his name has been spelt correctly. If he says anything but that he can see no writing, it is obvious that he is attempting to deceive, because red letters on a white opaque ground when viewed by *reflected* light cannot be seen through a red glass, since they offer no contrast to the background.

IX. Print on a piece of ordinary notepaper the letters R E S O R T. The letters should be made alternately with a very soft red crayon and a soft black pencil. If it is alleged that the right eye is blind, a piece of red glass is placed in front of the left eye, and the patient is asked, not to read the word, but to *spell* the letters in front of him. If he spells R E S O R T, then he sees with the right or alleged blind eye. The red glass prevents the red letters being seen with the left eye, and, as he *has* read the red letters, he must have done so with the right eye. It is important not to mark the letters heavily, or the impression of the letters, apart from colour, will be left on the paper and can be read; hence the recommendation to use a soft pencil. Red ink is not suitable.

X. A patient is asked to read simple small printed words from a book. Suddenly, whilst he reads, a pencil is placed vertically in the middle of the page of print, or three or four inches in front of it. If he sees with both eyes, he can read straight on, for he can see round the pencil as it were—he

really reads on each side of it. If one eye is blind he stops, for one or two words are hidden by the pencil (Javal. Cuignet).

XI. Alleged total blindness of one eye is readily demonstrated by directing the patient to read by *transmitted* light the letters of the word T H E O R Y made of transparent glass on an opaque ground. The letters are of red and green glass, and placed alternately. Assuming that the right eye is stated to be blind, before being asked to *spell* out the word, a spectacle frame is placed on the face, with a red glass in front of the left eye and a green glass in front of the right eye. By *transmitted* light through the red glass of the spectacles the red letters only are seen, and through the green glass the green letters only are seen. If, therefore, the patient reads the whole word, he has read the green letters with his right eye, which he stated was blind.

XII. With monocular vision stereoscopic vision is lost. By means of an ordinary stereoscope it may be demonstrated whether a patient is using one or both eyes. Most of the ordinary double photographs prepared for the stereoscope have a description of the subject printed at the bottom of one photo only—generally that opposite the right eye. This printed matter, when looked at through the stereoscope, is seen with the right eye only, and if, therefore, it is read, it proves that the right eye is not blind.

Now, if the printed matter is covered over by means of a strip of paper, and the same or other words are written at the bottom of the photograph which is opposite the left eye, and the patient again reads the description, he sees also with his left eye.

A special stereoscopic picture has been prepared. Opposite the right eye there is a picture of a boy, and opposite the left that of a man. These viewed through the stereoscope are seen separately if the eyes are closed alternately, but if looked at with both eyes the boy is seen on the man's back. The opportunity of catching out a malingerer with this device is obvious.

XIII. For the detection of pretended monocular vision a prism is useful. There are various ways of using it:

(a) Place a lighted candle in front of the patient; hold an 8° prism base outwards before one eye. If both eyes see, the one behind the prism will move inwards, and on removing

the prism will move outwards; the other eye remains fixed (Welz).

(b) A lighted candle is placed 20 feet from the patient; an 8° prism is put before the sound eye. If the superimposed double images are admitted, the fraud is apparent. In obtaining the admission, it should not be asked if he sees two images, which gives an opportunity for a negative reply; but he should be requested to state at once if the two images are placed one above the other or side by side, and which is the brighter.

In neither (a) nor (b) need the room be darkened, although artificial light is being used.

(c) Let us assume that it is fraudulently contended that the right eye is blind. A pair of ordinary spectacle trial frames, which have circular flat pieces of metal hinged at the sides of the frame, is placed on the patient's nose. The right eye is covered by closing the hinged shutter over the right side. He is asked to read small print with the left eye through the edge of a prism of 10° or 12° . The effect is to cause some divergence of the left eye. Now the right or alleged blind eye is suddenly uncovered, and he is asked to continue reading. He is bound to see double for a moment. In order to see with both eyes he *must* overcome this divergence. If, therefore, at the moment of withdrawal of the shutter he suddenly hesitates, it shows that for the moment he had double vision, and is accommodating so that he may see with both eyes, whereas if the one eye is blind he goes on quietly reading with the other as before.

XIV. Everyone knows the relative positions of his hand and face. If the malingerer is asked to put his hand straight out in front of him, not infrequently he puts it to the side. His hand may be taken and placed in different positions, and he is asked to look at it; even a blind man will attempt to follow the direction. Not so the malingerer; he looks away.

XV. Another efficient method is to place a lighted candle first to the extreme right and then to the extreme left side of the head, directing the patient to look *straight* forward. Assuming the left eye is said to be sightless, and he admits he sees the candle when it is on his left, then he sees with his left eye.

The more prominent the bridge of his nose, the more reliable the test.

Restriction of Field of Vision.—The perimeter is the usual instrument used for testing this condition, but its value is doubtful in cases of simulation, for the malingerer can often regulate his statements by noting certain parts of the instrument, such as a rivet or screw. The best method, therefore, is as follows :

Each eye must, of course, be examined separately. After eliminating the possibility of binocular vision, a slate or large sheet of paper is taken, and the field of vision is recorded first at 1 foot, then at 2, 3, 4, and 5 feet. Diminution of the field of vision will, of course, decrease normally with the distance, but the malingerer not infrequently repeats them as similar, and the well-known "tubular" field is sometimes elicited. This, of course, betrays him. It is well, however, to remember that the tubular field of vision is often found in true hysterics. This, however, can be negatived if the absence of the usual stigmata of this neurosis is proved.

Another method of testing the field of vision is to stand about 1 yard in front of the patient and direct him to keep his eyes steadily fixed on your own. He should then close his right eye while the observer closes his own left, and the patient should be asked to indicate when he catches sight of a small white object, such as a small square of cardboard inserted into the end of a penholder, which should be moved in a circular fashion and kept equidistant from the patient and observer, and should be gradually brought into the field of vision. If there is marked contraction of the field of vision, it should be accurately noted.

Simulated Ptosis may be exposed by suddenly, and without hesitation or warning, asking the examinee to look at the ceiling. Involuntarily the lid rises.

The impossibility of feigning insensitiveness of the cornea is also to be remembered. In an assumed fit the eyes are kept closed, or are blinked at intervals, but the pupils react to light and accommodation.

Simulated Blepharospasm.—Although seldom seen in civil life, blepharospasm is common amongst soldiers. It consists

in involuntary spasm of the orbicularis palpebrarum, and, although not always, is frequently assumed.

A Youthful Simulator.—Defective sight following an accident calls for heavy damages, and great care and much patience must be exercised in all such cases. For a lad of tender years to deliberately and intentionally exaggerate slight loss of visual acuity must be somewhat unusual. The following case, occurring in the practice of the author, is of interest :

B. Y., aged thirteen, had his right eye injured, the result of lime accidentally entering it. There was some disfigurement, but it did not amount to much, and was obviously, from the point of view of damages, insignificant. The lad complained, however, of loss of sight.

He was tested with different-sized letters. His left eye was covered, and he was asked to read with the right eye type of a certain size at a measured distance. Intuitively it was felt that he was pretending not to be able to read what he really could. At first he said he could only read at 20 feet what he should have been able to read at 80 feet—that is to say, he only read one-quarter of the normal range. After repeated examinations, which consisted in covering the right eye and getting him to read with the left, and then quickly covering the left and getting him to read with the right, at the same time constantly changing the test-cards, he became confused, and, forgetting his part, he read letters which showed his vision had improved to one-third the normal range. It was now suggested that he could read even better still with a glass in front of his eye, to which he readily assented. With this he read half the normal range, but—the glass used was a *plain* one !

This was now pointed out to the lad himself, and to his father, and they were told that it was obvious he was trying to deceive. He then read letters indicating that, in a single hour, the vision of the right eye had so improved that he could now read two-thirds of the normal range. No amount of coaxing could make him read better than this, nor could he. But this amount of vision (two-thirds the normal range) with one eye, and perfect vision in the other, is practically normal vision ; indeed, the author frequently passes for service electric-car drivers who have no better vision than this. No doubt the accident had produced a mistiness of the fluid inside the eye, which had gradually cleared up. The lad had had at one time some defect of vision, but at the time of my examination it had practically disappeared. At the trial an ophthalmic surgeon gave evidence in his favour, and the jury awarded £25, which was fair, for there was some disfigurement, and he had suffered pain.

Artificial Conjunctivitis is a condition which sometimes presents itself for discovery.

A. B. had frequent attacks of conjunctivitis of both eyes. He had been sent by his doctor to an ophthalmic surgeon, who thought it was due to a partially obstructed lachrymal duct. This was dilated, but the attacks continued. An unusual feature was that the inflammation attacked only the lower half of the conjunctivæ, and its reflection over the inside of the lower lids only. He was sent to another ophthalmic surgeon, but the condition remained unchanged. He was after ten months sent to me for examination and report. Suspecting that the inflammation was produced by artificial means, I induced his doctor to send him to a third ophthalmic surgeon, to whom I communicated my suspicions. He appreciated the circumstances, and pointed out that it was very unusual to have one part only of both conjunctivæ inflamed, and for the condition to remain so for such a lengthened period, and that it was difficult to see how such a condition could have existed, unless due to mechanical irritation, without producing a cloudiness of the lower part of the cornea. Trachoma was, he pointed out, the only condition which would inflame the lower half only of the conjunctivæ, and even in that disease the cornea would certainly have become affected.

There was no nasal discharge which might produce the condition; indeed, the only discharge present was that of tears, which were freely flowing, obviously to smooth over an irritated spot.

Both the conjunctivæ and the corneæ were somewhat insensitive, giving the impression that they had been frequently handled. Several tiny black or very dark pepper-like spots were seen over the congested areas on the inside of the lower lids. There was a complete absence of any such specks in the upper lid. The anæsthetic conjunctivæ had obviously become accustomed to the condition, otherwise even the very small foreign bodies present would have set up much irritation, blinking, etc. The congestion instantly disappeared when a drop of 1 in 3,000 solution of adrenalin was instilled into the eyes. The skin of the lower lids showed distinct evidence of having been rubbed frequently. This, of course, might have been induced by the irritation; on the other hand, he stated that he did not suffer any irritation *except when at work*. Somehow the patient gave the impression that he knew something about the cause. When told it could certainly be cured if he would go into a nursing home for a week, it was evident he would never entertain any such suggestion, although he could well afford it.

When he next presented himself to me, I insisted upon his going into a home for a short time. He became suspicious, absolutely declined to do so, and resigned his situation !

Introspective Litigants and Pre-existing Visual Defect.—

Defective vision is complained of as the result of accident in a very large number of cases. Most litigants, when enumerating the list of symptoms and inconveniences which they allege to be the result of their accident, complain that they do not see so

well as they did before the accident. Now, diminished vision as the result of an accident may, of course, occur; but it must be clearly understood that no claim of this sort can be admitted unless it is set up and substantiated upon pathological grounds—viz., actual fundus, or other changes which can be definitely seen and sworn to. It is necessary in all these cases to test very carefully for myopia and hypermetropia, and, above all, to remember presbyopia.

In a remarkable number of cases middle-aged persons who allege failing sight as an additional ground of claim have been proved, with very little trouble, to be merely in need of plus lenses; it is only the enforced rest of convalescence and the general search round for symptoms, that have led them to observe a defect which, although previously existing, was unnoticed.

The most trying period through which a claimant has to pass is when the amount of damages is being arranged with the defendant or his insurance company. Many who, until the time of enforced idleness after, it may be, some trifling accident, have not noticed that their near point has been gradually receding for years, suddenly discover it then, and not unnaturally apply the *post hoc ergo propter hoc* argument with some persistence. One or two plus lenses produced at the psychological moment cause this item to disappear from the statement of claim.

It is well to bear in mind that total blindness in one eye may happen after head injuries, and very few symptoms be apparent. Two such cases have recently come under my observation. In both the patient was ill for but a few weeks, as the result of a fall on the head. Few marks of violence were visible, yet in each case the orbital plate of the frontal bone had been broken in the neighbourhood of the optic nerve, which was thereby either wholly or partially severed, with the result of complete and permanent loss of function—i.e., total blindness of one eye.

CHAPTER IX

EXAMINATION OF THE EAR

PRETENDED deafness is somewhat difficult to detect. Its discovery depends on the amount of expert knowledge which can be applied, and much also depends upon the method and skill with which the examination is conducted.

An old-standing deafness can be diagnosed from the voice. The characteristic monotone of the deaf is only found in pronounced and genuine cases. Those who have nerve deafness are apt to speak loudly, since they do not hear their own voice well; the opposite is the case with those who suffer from throat or obstructive deafness. A man who is deaf in one ear, and who wishes to hear, naturally and involuntarily turns his hearing ear towards the speaker. Vowel sounds are better heard than consonants. Deep notes carry better than high, and a clearly articulated whisper is more audible than words pronounced loudly but indistinctly. No man who can hear ordinary conversation at 19 or 20 feet can justly say he is deaf.

I once heard a Judge very neatly catch out a reluctant juror, who complained that he was too deaf to serve. "I regret," said the Judge in kindly, sympathetic, and subdued tones, "to hear of your affliction. How long have you suffered?" The innocent ruse was quite apparent to everyone except the unhappy juror, who promptly replied that he had been deaf for a long time. "But," said the Judge, "you heard me just now; you will do nicely. I cannot excuse you."

Before proceeding to the examination of the hearing power in a case of deafness which we suspect to be feigned, the meatus should be examined by reflected light. It is well to assume

the deafness, and to let the patient understand, both by manner and pitch of voice, that it is taken for granted. If wax is present, this should be removed forthwith. The claimant's doctor, if present, should be asked to do this. It is *never* wise to perform even so simple and necessary an act without first obtaining (preferably in writing) the claimant's consent to do so.

Cerumen which has long been present is often difficult to remove, and may even necessitate a delay of twenty-four hours, during which a weak solution of bicarbonate of soda should be frequently instilled into the ear, to facilitate the removal of the wax. This is, of course, an inconvenience, and can sometimes be avoided by using peroxide of hydrogen (strength 5 volumes), which softens the wax. In any case thoroughness is the keynote of all medico-legal examinations which are of any value.

B. Z.—On one occasion, when I was examining a claimant at the office of a solicitor who did a large business in Workmen's Compensation cases, it was stated by the doctor retained by the solicitor that the claimant was deaf and had diminished vision. He had had a head injury, and the inference was apparent. The difficulty with his sight was obviously presbyopia, and this, when it was put to him, the doctor admitted. The otoscope revealed the presence of cerumen, which, when it was discovered, the doctor also admitted, and so the case gradually crumbled away.

It is a matter of much importance for the examining medical man to take with him to all examinations the instruments which he may require for a thorough examination (see p. 102). The presence of an epithelial plug or cerumen is proof that no otorrhœa can have existed for a considerable time.

Cerumen which has been long embedded in a meatus may be associated with a temporary blocking of the Eustachian tube, and Politzer's bag often instantly removes deafness due to this cause.

There are two varieties of deafness one may have to deal with. The first results from injury to the sound-conducting apparatus—*i.e.*, the tympanic membrane and ossicles: this is called "obstructive deafness"; the second results from derangement of the internal ear, and is known as "nerve deafness."

To differentiate between these two, certain tests are of value, and may now be described.

Rinne's Test.—The length of time that the sound can be heard when the tuning-fork is applied to the bone behind the ear is compared with the duration of the sound when the tuning-fork is put close to the external auditory meatus, and the results obtained differentiate between normal hearing, nerve deafness, and obstructive deafness.

In the case of normal hearing the tuning-fork is heard for several seconds longer when placed at the auditory meatus (air conduction) than when applied to the bone behind the ear (bone conduction).

The same results are obtained in the case of nerve deafness, but the duration of the sound is diminished both through the ear and through the bone. In this case Rinne's test is positive.

On the other hand, in obstructive deafness or injury to the middle ear (*i.e.*, tympanic membrane and ossicles) bone conduction is relatively increased, sound being transmitted through bone to the auditory nerve, whilst air conduction is diminished. Hence the tuning-fork can often be heard longer on the bone than when placed near the meatus. In this case Rinne's test is negative.

Weber's Test.—This is of use in cases of unilateral deafness. When the vibrating tuning-fork is placed upon the vertex, it is heard more loudly in the deaf ear where the deafness is obstructive, but where the nerve is at fault the sound will be heard best by the good ear. This helps to differentiate between the two great classes of deafness.

Besides these tests some other points of difference should be noted. Thus, in the case of obstructive deafness the appearance of the tympanic membrane is important; a ground glass appearance is often associated with a gradual, slow sclerosis of the connective tissue in the middle ear, and with gradually increasing deafness. It is, of course, well known that rupture of the tympanic membrane does not necessarily carry with it appreciably diminished hearing. The examiner's capacity to estimate the effect, from a hearing-point of view, of abnormalities in the tympanum depends upon his knowledge of ear disease.

Riveters, boiler-makers, and artillerymen, from the nature of their occupation, are often partially deaf.

Do not forget that earache is often produced by decayed teeth, even when the decay is not apparent.

Rupture of the Tympanic Membrane.—There are several causes of a solution of continuity of the drum of the ear, but the two which interest us most are, first, rupture caused by air pressure—*e.g.*, by a severe blow over the outside ear—and, second, rupture as the result of fracture of the base of the skull. If the tympanum has been ruptured it is of much importance to discover which of these causes has produced the condition. This is not really a question of malingering, but the claimant is sure to assume the worst, and, if wrong in his assumption, the consequences to the defendant are the same as if he were intentionally malingering. A blow over the ear which ruptures the drum must, of course, be a severe one, but the amount of resulting hæmorrhage is never great, often amounting only to a few drops of blood. If the wound is kept aseptic, it rapidly heals and does not produce deafness. If, on the other hand, it suppurates, very serious immediate and remote consequences may follow. The amount of hæmorrhage accompanying rupture of the tympanum the result of fracture of the base of the skull is always considerable. The most important diagnostic point between rupture of the tympanic membrane caused by a blow on the ear, and rupture produced by the much more serious condition of fractured base, is that in the latter condition the hæmorrhage is accompanied by a discharge of cerebro-spinal fluid. The usual symptoms of fractured base are hæmorrhage from nose, mouth, ear, and sometimes bruising behind the ear, which appears a few days after the accident.

Perforation or rupture of the drum is much more common as a result of disease than of accident. It is a matter of the utmost importance to tell whether a rupture is recent or of old standing, and this can only be done if an opportunity is afforded of examining the ear immediately after an accident. Rupture which is recent is fairly recognizable as such, but a rupture that is a week old is frequently indistinguishable from an old perforation due to disease.

TABLE SHOWING THE DIFFERENCE IN SIGNS OF A RECENT RUPTURE AS COMPARED WITH OLD-STANDING DISEASE.

<i>Recent.</i>	<i>Old-Standing Disease.</i>
Edges, clear linear cut radiating from centre to edge.	Edges thickened by scar tissue.
Not adherent to inner wall of middle ear.	Often adherent to inner wall of middle ear.
Edges bruised and covered with dried crusts of blood. No pus.	Much pus everywhere.
No inflammation except at rupture.	Whole of the drum inflamed, and whole of middle ear and meatus may be inflamed.
Slight deafness, which passes off when ruptured membrane heals.	Varies from slight to complete deafness.
Middle ear escapes injury.	Middle ear infected.
Rupture does not take place without an accident.	A hole in the tympanic membrane, common in childhood, from disease.

Result of Fracture of Petrous-Temporal.—Fracture of the petrous-temporal bone passing through the internal auditory meatus would almost certainly involve both the seventh (facial) and eighth (auditory) cranial nerves, seeing that they run together at this point for about $\frac{1}{2}$ inch; therefore deafness from this cause is generally accompanied by some facial paralysis.*

Sudden hæmorrhage into the internal ear (vestibule or semicircular canals) produces Ménière's disease. The characteristic symptoms are—(1) Sudden severe vertigo; (2) nerve deafness of one or both ears; (3) tinnitus. The disease is very intractable, and recurs, leaving the patient's condition worse after each attack. It cannot be regarded as the result

* It will be remembered that the seventh and eighth cranial nerves enter the internal auditory meatus, and run together as far as the bottom of that meatus. At this point the eighth (auditory) pierces foramina which conduct it into the internal ear. The seventh (facial) continues its course alone in the canal, and emerges from the base of the skull through the stylo-mastoid foramen.

of any employment, nor, as far as is known, does any occupation aggravate the condition.

Nerve Deafness.—In a case of nerve deafness the use of Galton's whistle will demonstrate considerable loss of high tones, and the patient often complains of distressing noises in the head. If the usual signs of nerve deafness are present, and yet the patient admits that he hears the highest notes of the scale as plainly as he hears the lowest, further tests should be studiously applied.

	<i>Nerve Deafness.</i>	<i>Obstructive Deafness.</i>
Patient's voice..	Loud.	Quiet.
Rinne's test ..	Bone less than air conduction (positive).	Bone better than air conduction (negative).
Weber's test ..	If deafness unilateral, tuning-fork on vertex best heard in good ear.	Best heard in bad ear.
Condition of drum	Drum not necessarily abnormal.	Drum abnormal: indrawn, thickened, or perforated, etc.
Cause	Fevers, syphilis, heredity, Ménière's disease, etc.; injury of or pressure on eighth nerve; rheumatism, gout, drugs.	Abnormalities and disease of nose, throat, middle or external ear.
Pitch (Galton's whistle)	High notes not well heard.	High notes as audible as others.
Noisy surroundings	Increase deafness.	Often improve hearing.

There are many causes of nerve deafness; probably the most common are extension of mischief from the middle ear and otosclerosis. Other frequent causes are trauma (where fracture of the skull has involved the petrous portion of the temporal bone, and consequently the auditory nerve), syphilis, rheumatism, and gout. Nerve deafness may also come on suddenly after such infectious diseases as enteric fever, in-

fluenza, and diphtheria; and it may occur transitorily from the use of drugs such as quinine, salicylates, and so on.

The prognosis of these cases should be very guarded, but if there is no improvement within six months after the injury none will take place.

The table on p. 222, showing the chief points of difference between the two great classes of deafness, may be found useful.

Deafness in One Ear.—This is a very common complaint after accidents. Assuming that deafness is alleged in the left ear, a tuning-fork is placed behind the left ear, whilst the right ear is closed. Even though the left ear is completely deaf, the vibrations will be conducted by bone to the sound ear and be heard, yet a malingerer will frequently deny all knowledge of the sound.

Another useful test is as follows: Let us say deafness is alleged on the right side only. The external meatus of the *left* ear is plugged with the forefinger of the examiner's hand. The patient is then asked whether hearing in *that* ear is good. An affirmative answer proves that the right ear is not deaf as alleged.

If, when the sound ear is apparently closed by placing the whole hand over it, but leaving a chink between the fingers, the examinee states that he hears nothing, there is *prima facie* evidence of intent to deceive.

Sometimes these cases are very difficult, sometimes very easy.

E. U.—During the present war, as a member of a military board I was called upon to decide the question of fitness or otherwise for field duty of thousands of cases. The war was at its height, time was pressing, and rapid and expeditious methods had to be resorted to. Certain complaints seemed to be the fashion of the day; deafness was having its turn. A guardsman presented himself whose voice was perfectly normal, and whose complaint of deafness I somehow instinctively distrusted.

He was asked what was the matter, to which he replied that he was deaf. When asked which ear was affected, he said the left. He was told to cover his right ear, and in a low tone of voice the order was given, "About turn." He looked fixedly and did not move. In an equally low tone I said slowly, with some acerbity, "Do what you are told," when he slowly and reluctantly turned round. He was forthwith reported fit for field duty.

The whole process of diagnosis and treatment lasted not more than

twenty-five seconds. Seeing the regimental doctor, who was in attendance, smiling, I elicited the fact that this man had given a good deal of trouble, and that the following certificate was in his possession, although not brought to my notice until my decision had been made:

"I have examined this man on three occasions. On each occasion his statements have varied to such a degree as to make me convinced that they are not in accordance with facts. There certainly is a little diminution of hearing on the left side, but not, in my opinion, so much as to interfere with his work to any serious degree. There are some signs of nervous instability—*e.g.*, fluttering eyelids, increased knee-jerks—but after an exhaustive examination I have come to the conclusion that there is some fixed idea, of a deliberate nature, of deafness, without sufficient grounds for its presence.—(Signed) Lieut. —, R.A.M.C."

Total Deafness.—It must be seldom, indeed, that anyone would have the temerity to allege complete deafness when he did, in fact, hear well with both ears. If any such case arose, it would be very easy of detection, for obviously no sane man could successfully keep up for any length of time such an abnormal existence.

A somewhat novel device for testing alleged total deafness has been suggested; it is to time an alarum clock so that it shall "go off" in the course of the examination.

Method of Testing Hearing.—This must be done with much accuracy. One ear should be closed either by means of Hawkesley's clay (often used by officers in target practice) or by insisting upon the palm of the hand accurately covering the meatus of the ear and being firmly pressed against it. The patient is then blindfolded, and he is tested at varying distances by means of a watch, tuning-fork, or whispering. The results must be definitely recorded. If malingering is being attempted, it is impossible for accuracy to be maintained, and the recorded results will vary in an amusing way. The hearing distances will be found to gradually increase as the testing continues. For instance, the patient is asked whether he hears the watch at, say, 12 feet. If he answers in the negative, the examiner noiselessly approaches the patient, until, perhaps, at 2 feet he admits that he hears it. This is noted, and the experiment repeated several times. The bandage covering his eyes is removed, and the whole experiment is fully explained. The eyes are again blindfolded, and the experiment repeated. At every stage

a careful record should be made in writing. In time the examinee becomes very uncertain of his ground, and his answers become so inaccurate as to prove he is not speaking the truth.

In some types of deafness whispering may be heard when in close proximity to the patient, whilst shouting at a distance is inaudible.

E. X.—A man who was making a large claim for damages for alleged deafness, brought about by an accident, was examined by me in consultation with three other doctors. He was particularly artful, and said that he could not hear, insisting that his left ear was deaf, and no amount of coaxing could induce him to hear on that side. I filled both his ears with Hawksley's clay, and removed it from first one ear and then the other, at the same time engaging him in conversation. When next I replaced it in both ears it irritated him, and he became very angry. I then quickly removed the clay from the left ear, leaving the right ear obstructed. He carried on the conversation, and replied to a question quite easily.

Emotional Causes.—As a result of violent emotional influence the sensation of hearing may for the time be abolished. Everyone is familiar with the fact that, if one is much pre-occupied, even comparatively loud sounds may not be heard, and so, presumably, the appreciation or interpretation of sound in the higher centres may, from obscure influences, the nature of which we do not understand, inhibit ordinary hearing power.

A case is quoted, by Sir William Dalby, of a young girl of seventeen who one morning came down to breakfast totally deaf. Judging from the unaltered modulations of her voice, he felt satisfied that she could in fact hear, but it was six months before the hearing suddenly returned.

Chronic Ear Disease and Injury.—It is by no means an uncommon thing for a patient who has permanently impaired hearing, the result of chronic otitis media, to attribute his deafness entirely to an accident; and it requires considerable tact, and not a little experience, in dealing with cases of this sort, to elicit the fact that the deafness, which is undoubtedly present, was in fact present before the accident.

E. V., whilst descending from the top of a bus, injured her head in circumstances which *ex facie* gave rise to a claim. There was a scalp wound in the neighbourhood of the right ear. Her state-

ment of claim was to the effect that she was deaf in consequence of the accident. I satisfied myself that her hearing was much impaired by making several surprising statements, such as that I was aware that she now admitted that her hearing was perfect, that her doctor (who was present) agreed with me that she could now hear as well as anyone, and so forth, none of which aroused her attention or induced any protest. Gradually raising my voice, I discovered the exact pitch that she could hear, and by raising and lowering it at intervals, and watching her demeanour, it was perfectly evident that not only was she genuinely deaf, but that she was in no way exaggerating. Examination with the otoscope showed the usual signs of advanced middle ear disease. The drum in the right ear was perforated, and many granulations obscured the view of the membrane; whilst in the left there was a strong suspicion of a similar condition, although no clear view could be obtained owing to the presence of cerumen. At first sight, therefore, here was conclusive proof of the pre-existence of the deafness; but the accident had occurred nine months before my examination, and although one was morally certain, from the appearance and from the want of modulation of the voice, that the deafness must have been of years' standing, yet there would be considerable difficulty in convincing a jury of this: for cases of this sort end in Common Law actions, not in an arbitration under the Workmen's Compensation Act, and therefore no medical assessor is present. After satisfying myself with a tuning-fork that the deafness was produced by middle ear disease, I took my courage in both hands, and with much assurance loudly demanded how long ago it was since the discharge *had stopped*, and was rewarded by the admission that there had at one time been a discharge from both ears. At first its appearance was said to be after the accident, but ultimately she admitted that it was in fact before it. Had I asked whether she had ever had a discharge from one or both ears, I think she would probably have denied it; but after the use of the otoscope and the mysterious application of the tuning-fork, which to her seemed in some extraordinary way to die away when held in front of the ear, but to spring into life again when applied to the bone behind the ear, the patient felt that he who could practise such mystic arts *must* know her previous history, and when the question was insidiously put in the form of, "When did the discharge stop?" the proper answer slipped out, making much difference to the responsibility of the defendant.

A scalp wound cannot in any way interfere with hearing or produce ear disease. It is a mistake to assume, as those not accustomed to the Law Courts would probably do, that this elementary fact will not be challenged in court. One must remember that Judges and juries have little or no accurate knowledge of medical matters, and it is their business to weigh the evidence; and one must not be surprised if two medical

men swear, with great solemnity, that not only can deafness be produced by a scalp wound, but that they themselves have seen at least one case each.

It is important therefore, if possible, to obtain an admission like the above from the patient at the time of the examination.

Simulated Deafness.—Simulated deafness is almost always sudden in its onset. A good deal can be gained by observing whether the voice is modulated. The quick movements of the eyes by which genuinely deaf people try to make up for their lost sense of hearing is, of course, absent.

In ordinary cases of malingering the best course to adopt is to accept the situation, to give no opportunity for the patient to doubt your belief in the genuineness of the condition; for if the malingerer thinks he is suspected, he will continue to mangle to prove that he is not a malingerer. It is a good plan to remark in an ordinary tone of voice, not to the patient, but to a bystander, that conditions of this sort sometimes disappear as quickly as they come. The malingerer may sometimes be caught out in a very simple way. His pulse is felt and counted with some ceremony, the conjunctivæ of his lower lids are exposed and examined, and then in a comparatively low tone of voice he is asked to put out his tongue, a request which is sometimes acceded to.

E. W.—After a prolonged examination for alleged deafness, in which I had completely failed to obtain any evidence that an exceedingly astute malingerer was shamming, I got the necessary evidence by casually remarking in a low voice that, the examination being over, the patient could put on his overcoat and go: he put his coat on at once. Thinking that I might have involuntarily pointed to his coat or made some indicative gesture, I remarked in an equally low tone of voice, after he had put his coat on, “Oh no! take it off again for a moment.” And he did so!

It has been suggested that a plug of cotton-wool should be inserted into the meatus of the *normal* ear, and a vibrating tuning-fork placed on the vertex. The malingerer, assuming that you believe he does not hear with his deaf ear, and knowing that his sound ear has been filled with cotton-wool, will sometimes say that he does not hear the tuning-fork at all. It should be remembered that the mere insertion of a little cotton-wool in the meatus increases (if anything) bone conduction, and does not, as the patient fancies, diminish hearing.

An artful method of confusing a simulator in a case of partial deafness is to ask the patient completely to occlude the meatus of the *sound* ear with his hand. Then definitely ascertain the hearing distance of the alleged partially deaf ear. After this has been ascertained, insert into the meatus of the alleged partially deaf ear a thin piece of indiarubber tubing, taking great care that its lumen is left patent. The simulant, thinking that his ear has been plugged—for this, of course, is the sensation which the rubber tubing gives—will probably now say that he hears nothing, whereas an open indiarubber tube placed in this way makes very little difference in the hearing power.

It has been suggested that during the examination a third party should make some disparaging or insulting observations with reference to the suspected malingerer, and that the examiner should pay particular attention to the effect produced upon the features. I have not myself made use of this experiment, but merely mention it so that the roll of suggested methods may be complete.

When a patient has unwittingly learnt to lip-read, it puts the question of malingering out of court.

Mr. T. Mark Hovell, F.R.C.S., at a meeting of the Otological Section of the Royal Society of Medicine, mentioned the following test:

The subject under investigation, with his clothes on, is stroked on the back alternately with a hand and with a brush, and after that the back is stroked with the hand whilst the physician's sleeve is simultaneously stroked with the brush. If the patient is really deaf, he will correctly answer whether his clothes are being stroked with a hand or a brush, as during these operations he solely trusts to his sense of feeling. The malingerer, on the other hand, will contradict himself in his replies, as he does not know exactly whether he perceives the contact of the hand or brush, the noise of which he hears.

The Stethoscope Test.—I am satisfied that what has been described as the stethoscope test is wholly unreliable. The method suggested is to place the earpieces of a binaural stethoscope into the ears of the examinee, and to speak to him from the chest-piece; the tube leading to the sound or hearing ear is pressed between the finger and thumb, so that no sound is transmitted to the hearing ear. Questions are now put, and if

they are answered the allegation is that they *must* have been heard by the alleged deaf ear through the indiarubber tube leading to that ear; and as an aurist writes: "The malingerer will soon be caught out." Unfortunately, it is not the malingerer who is "caught out," but the examiner, as anyone can easily prove to himself by trying the experiment. As a matter of fact, it is impossible with an ordinary stethoscope to prevent sound being transmitted, however tightly the earpieces fit the ear. The examinee, in fact, hears quite easily if both indiarubber tubes are blocked, and the test, though pretty in theory, is useless in practice.



FIG. 10.

The idea, however, is a good one, and I have had prepared for me by the Holborn Surgical Instrument Company an instrument (Fig. 10) which, though somewhat clumsy, is perfectly satisfactory. Instead of the ordinary small bone end-pieces of the binaural stethoscope, there are two glass bell-shaped receivers which are made large enough to contain the whole auricle. The free edge is fitted with an indiarubber cushion, which is capable of being inflated, thus permitting accurate adjustment, and effectually preventing sound being transmitted

between the instrument and the side of the head. This latter arrangement is exactly similar to that which is found in all mouth-pieces of nitrous oxide gas apparatus. The summit of each bell-shaped receiver tapers off into a short glass tube, which may be seen in the diagram supporting the ring and little fingers of both the right and the left hand. To these tubes are attached two pieces of indiarubber tubing, each $9\frac{1}{2}$ feet long. The other ends of the rubber tubing are joined to a Y-shaped metal connection, the tail of which is attached to an ordinary glass funnel by a piece of rubber some 6 inches long.

As in Blackwell's binaural stethoscope, all constrictions are avoided where the rubber joins both the glass bell-shaped receivers, the Y-shaped connection, and the glass funnel.

The three orifices of the Y-tube connection and the glass funnel have knife edges, so that there is no lessening of the calibre anywhere. The sectional area of the indiarubber tubing between the glass funnel and the Y connection is equal to the sectional area of *one* of the longer tubes. There is thus no narrowing of the lumen of the tube from the ear of the patient to the mouth of the examiner when one of the long tubes is compressed in the experiment about to be described.

The long tube leading to the right ear is of red rubber; the left is of black. Now, if the examinee holds the glass receivers close against his ears, and the examiner, standing apart the full length of the tube, speaks into the glass funnel in a low voice, it is obvious that sound can only be transmitted to either ear *through* the instrument. Let us suppose that the patient who is being examined claims to be deaf in the right ear. The black tube is pinched, and he is asked in a low tone whether the instrument fits comfortably. If he answers the question, it is obvious that he does, in fact, hear with the right—that is, the alleged deaf ear.

Should he be so wary as to avoid this trap, a constant succession of questions passed down one or other of the tubes, not necessarily in regular sequence, will certainly lead to his downfall if the deafness is non-existent. If a schedule is previously prepared of the order in which the tubes are to be used, and notes are made of the replies when received, they are conclusive proof of the truth or otherwise of the allegation of infirmity.

From actual experiment I find that if the indiarubber tubing is too short, sound is, in spite of the arrangement of the apparatus, transmitted by aerial conduction, presumably through the skull; therefore, the tubes should be of the length above described. Practically one avoids all possibility of transmission except through the tubes by speaking from another room, the door of which is left just sufficiently ajar to avoid kinking the tubes.

This also facilitates the manipulation of the tubes so that the examinee cannot frame his answers according to the tube he sees pinched. If another room is not available, stand the patient facing a blank wall, and manipulate the tubes behind his back.

Simulated Otorrhœa.—Butter, oil, margarine, or condensed milk may have been inserted into the meatus to simulate discharge.

Deaf-Mutism is rarely simulated. Should such a case arise a test on somewhat similar lines to the one I am about to detail, which was adopted by an army doctor in order to expose a shamming soldier, might be devised, and should prove effective.

The soldier, who was supposed to be both deaf and dumb, was placed in hospital under observation. The surgeon at his daily visits ordered, in the presence of the patient, certain delicacies by way of extra nourishment; these he ordered to be entered on the diet-table at the head of the bed. One day it was a chicken, another a couple of freshly-laid eggs, another bacon, and a free allowance of beer every day. It was arranged that the medical orderly should bring nothing but plain milk to satisfy the desires of the patient. Every day, in the presence of the patient, the orderly was asked whether each and every article of diet had been provided, and he asseverated with some emphasis that they had, and that the patient had enjoyed them. For some days the soldier stood it manfully. But there was a limit to his endurance—he was doubtless convinced that the comforts intended for him were being annexed by the orderly—and at last he could stand it no longer, so burst out with, “He’s a ——— liar, sir; I’ve had nothing but milk for a week !”