

Three successful pregnancies subsequent to denervation of the internal iliac vessels are reported. The first patient had had two stillbirths and the second three stillbirths. The third patient had had a fulminating attack of pre-eclampsia at the 22nd week of her first pregnancy and possessed but one kidney.

It is suggested that adequate nutrition of the placenta, particularly when it is being formed, is essential to a normal pregnancy, and that in a very few cases the actual size of the internal iliac arteries makes this impossible in the presence of normal arterial tone.

The fact that adequate nutrition of the placenta is essential to a normal pregnancy by no means excludes the necessity for the proper nourishment of the maternal organs, and in the vast majority of cases the one requisite is impossible apart from the other.

No evidence was obtained to suggest that the pre-eclamptic syndrome can be attributed to afferent nerve impulses arising in the uterus.

The cases studied provide no support for the view that long-sustained hypertension and proteinuria during pregnancy cause either chronic nephritis or hypertension, or can be attributed to a "renal shunt."

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THE PSYCHIATRIST AND COMPENSATION NEUROSES*

BY

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The term "neurosis" as used in litigation is notorious for the looseness of its application. It is in fact a term which is applied generally to describe any mental disorder, short of an obvious psychosis, following an injury.

As a preliminary, therefore, to any discussion on the question of compensation neuroses, I think it advisable to refer to the various types of mental disorder which are associated with trauma. The obvious psychotic results of brain-tissue damage from direct injury vary from the acute traumatic deliria to mental defect. The post-traumatic constitution of Adolf Meyer and the post-concussional or contusional states of Henderson may appear obscure to the general practitioner or to the lawyer but are none the less definite morbid conditions of grave significance, undoubtedly brought about by tissue damage. They have a reasonably objective symptomatology, and in many cases have a positive electroencephalographic reading. The psychoses, which are less obviously associated with direct brain injury, include the various well-recognized constitutional syn-

dromes of schizophrenia, manic or depressive states, and paranoia. The attributability of these constitutional syndromes to injury, either with or without head injury, depends very largely on the factor of coincidence—namely, the development of the psychosis in a previously normal person within a reasonable time after the injury. The fact that there may have been evidence of cerebral damage, such as amnesia or other confusional signs, is not in itself complete assurance that the injury was responsible for the development of the psychotic state. It is merely corroborative of the supposition based on the chronology of evidence that the psychosis was precipitated by the injury.

To come to the question of so-called compensation neuroses, it is a first essential to define as accurately as possible the meaning of neurosis. It may be said at once that, except in so far as neuroses associated with injury involve the question of compensation, there is no such entity as a compensation neurosis. Such an appellation might be applied with equal justification to more obvious results of injury—for example, compensation fracture, dislocations, etc.

The neuroses which follow an injury do not in any way differ symptomatologically or otherwise from the neuroses met with daily in psychiatric clinics, where no question of compensation arises, but merely the question of treatment. They are well-defined syndromes of varying degrees of severity, and, while there may be overlapping of symptoms complicating the diagnosis, they have been classified under well-recognized headings of neurasthenia, anxiety states, obsessional states, and hysteria.

Henderson, in his textbook of psychiatry, makes a distinction between traumatic neuroses and traumatic psychoneuroses, attributing the former to physical damage and the latter to the psychological effect on the personality. Most authors agree that the extent or site of the injury has no specific bearing on the nature or type of the neurosis. This has been conclusively shown in the studies of the neuroses occurring in large groups during the war.

The work of Parfitt on neuroses in the R.A.F., of Guttman and Baker on neuroses in firemen during the war, and of Linford Rees on neuroses in women in auxiliary services all point to the same conclusion, that the primary aetiological factor in all cases of neurosis is a psychological predisposition, which may become manifest only when exposed to certain forms of stress. The term "neurosis of psychoneurosis" must therefore be taken as one and the same thing, with the same aetiological mechanism.

Malingering

In the approach to a case of alleged neurosis in which compensation is involved, the first essential is to make a reasonably accurate diagnosis of the nature of the neurosis, and the examining physician should endeavour to satisfy himself whether he is dealing with one of the accepted well-recognized and well-defined forms. When he has concluded his investigations he should be able to state whether the case comes under the heading of a neurasthenia, an anxiety state, an anxiety hysteria, a hysteria, or an obsessional neurosis. If he has succeeded in making a diagnosis under any of these categories he must then satisfy himself that the signs and symptoms on which he has based his opinion are not simulated. To rule out simulation is not always an easy task. The malingerer can be very cunning, as the prize is great. Malingering can be ruled out only by the careful correlation of signs and symptoms by a

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psychiatrist of great experience. The symptomatology of the neurosis is so protean in character that even a very experienced psychiatrist may be unable to arrive at a definite decision in certain cases, and wrong judgments have been made on that account, but at least the margin of error is reduced to a minimum by such a scientific approach. Accuracy in defining the nature of the neurosis is one of the surest methods of obviating malingering.

Attributability

In cases of neuroses alleged to have been brought about by injury and in which compensation is involved the question of attributability is the first important consideration. It is well to consider what are the accepted theories of aetiology. These theories, as already pointed out, all agree that the neuroses are mainly psychogenic, that they are a dysfunction of the mental processes brought about by subconscious motives. Freud expounds that they are all degrees of the same process—namely, anxiety—and that obsessions and hysterical manifestations are purely symptoms or symbols of varying degrees of anxiety. The results of psycho-analysis support this theory.

While neuroses may occur without any external cause, the great majority may be shown to have precipitating factors, either of continuous nature in the environment or of a dramatic nature. It is the first objective of the examining psychiatrist, in any case, to endeavour to ascertain what are the contributory or precipitating factors. These factors may be found in the simple economic, social, or sexual problems of life, or may consist of emotional stress of a dramatic nature, such as a harrowing experience—a young person exposed to scenes of revulsion or to an assault. Infective or toxic processes may be precipitating factors.

The conclusion to be drawn is that in certain individuals, if bodily and nervous tension is lowered by psychological or physical processes, a neurosis may develop as a result. Such individuals must be regarded as possessing what has been labelled predisposition to neurosis.

Predisposition

What is predisposition to neurosis? As a vernacular term it merely means that a state of neuroticism exists, hitherto kept in check but now coming to the surface owing to release of normal control. Such a conception of predisposition carries the implication that the individual was never really normal and previously had only the outward appearances or normality, and that, in fact, the neurosis must become overt in any case at some time. If this conception were to be accepted by judicial authorities the attributability of neurosis to injury would be regarded as very small indeed and compensation would be measured not in terms of the gravity of the neurosis but in terms of the very small part which the injury would be expected to play as a contributory factor. As it is correct to assume that all cases of neurosis which occur after the traumatic episode must have had a predisposition, the understanding of the meaning of predisposition is very important.

Predisposition, which has been defined as a "want of harmony or a state of functional weakness in some organ," is one of the most important factors not only in mental illness but in organic illness. The basis of all pathology depends on it. It consists in a hidden morbid reactive tendency in the organism which can reveal itself only under certain conditions. In the field of organic pathology science has not been content to accept complacently predisposition towards disease as an indication of an insurmountable defect but rather to regard it as an incentive to examine, analyse, and combat the pathology which renders one organism more prone than another to be affected by pathogenic conditions. The fact that only a small percentage of a group of people exposed to any type of infectious disease develop that disease is proof that predisposition towards the disease exists in a certain number. That predisposition may be due to many different causes. It may be a congenital lack of

resisting qualities; it may be the failure to develop an immunity in early life; it may be an acquired defect from dietetic reasons, etc.

In mental illness, predisposition may depend on maldevelopment of particular cerebral organs with hypofunction of any organ such as the digestive, renal, or genital glands; it may be dependent on a disorder of metabolism; it may be the result of alcohol intake or toxic processes; it may be the conditioning of the organisms in the formative years or merely a faulty adjustment at critical stages of development. It must be regarded as a susceptibility to disease which under normal conditions may remain hidden in the adult but be revealed under the influence of particular morbid agents or when subjected to some exceptional strain. The quality or quantity of the strain is unpredictable and can be assessed only when the effects have become apparent. Predisposition, then, may not be referred to as a condition which would lessen the responsibility of the precipitating factor, such as injury, direct or indirect, in causing a neurosis.

Prognosis

Of equal importance to assessing attributability for neurosis to injury is the estimation of prognosis. The neuroses vary in their incapacitating effect. A large number of the various types of neuroses do not result in incapacity to pursue normal avocations. Apart from the painful preoccupation with the anxiety, obsessional, or hysterical state, the necessities of reality are observed and carried out, and patients who are capable of carrying on their normal occupations have a reasonably good prognosis of recovering from even the painful effect. Every psychiatrist in practice has a large group of people suffering from these mild neuroses who come at intervals for reassurance and advice. It is conceivable that if such patients felt that their neuroses were brought about by an injury for which they could get compensation they would not make the required effort to occupy themselves, as it is only necessity which compels them to do so.

It is such mild cases that are responsible for the prevalent idea that all cases of traumatic neuroses recover when their compensation is settled. Practically all the reliable literature on this question goes to show that settlement of the compensation does not result in recovery except in a small percentage. This small percentage consists of the very mild cases.

I do not distinguish any difference between the prognosis of graver cases of neuroses attributable to injury than similar cases in which injury is not a factor. It is determined to a large extent by the question of treatment. Most cases of anxiety neurosis will respond to energetic modern scientific treatment if available. Obsessional states and hysterias are more intractable to treatment, largely on account of the fact that the psychotherapeutic treatment which is in each individual case necessary is of such prolonged nature, and also because the standards of psychotherapeutic treatment vary very much. I think it reasonable to say that the facilities for such prolonged psychotherapeutic treatment in individual cases up to now were so short of requirement that a false attitude of pessimism with regard to the outcome of these graver types of neuroses has been generally accepted. Such standards, however, have to be taken into account, and it has to be admitted, therefore, that the hope of recovery for a considerable portion of these neuroses is poor, and that the opinion so generally expounded that most traumatic neuroses get well when the compensation has been settled is not correct.

Legal Procedure

The system of judging medical evidence in courts of law has been the subject of various deprecatory references, mainly by members of the medical profession. The principal arguments put forward against the present system are: (1) The atmosphere of opposition, inherent in a court, is apt to encourage the formation of a bias which may

unwittingly influence the opinion of some doctors. (2) That the effort to discredit medical evidence by counsel in cross-examination may confuse a medical witness not experienced in courts of law, and distort the reasons on which he bases his opinion. (3) That the conflict of opinions expressed by doctors in courts serves to bring the medical profession into disrepute. (4) That the references to which a doctor can point in support of his opinion are so limited by legal requirements of evidence that a sound opinion may appear to lack a proper basis.

While these objections have a certain amount of justification it must be admitted that opinions expressed by doctors often differ very widely, and it would seem that where different opinions are put forward medical evidence can be assessed only by the recognized methods of examination and cross-examination in order to arrive at the truth. The difficulties met with in assessing medical evidence have been recognized by legislation, which under the Workmen's Compensation Act provides for a medical referee. The Workmen's Compensation Act also provides that the medical referee may enlist the services of a specialist. It is common knowledge, however, that these provisions are not availed of fully by the courts, and in cases in which mental illness is at issue it is practically unknown that the courts employ an independent psychiatrist to assist the judge. It should be very apparent that only a person highly trained in psychology and mental illness is capable of following the anamnesis on which the diagnosis and prognosis are based. It would seem, therefore, that when mental illness is a matter of litigation it would be a good thing if the courts had a psychiatrist of well-recognized experience and standing to help in assessing mental illness in such cases, as it must be extremely difficult, if not impossible, for a judge to distinguish between the various points on which conflicting opinions are based.

Summary

There is no medical entity called a compensation neurosis. So-called compensation neuroses do not differ from neuroses in which only the desire for treatment is involved.

It is essential, in dealing with an alleged case of neurosis, to make as accurate a diagnosis of the illness as possible—whether neurasthenia, obsessional or anxiety state, or hysteria—and to assess the contributory or precipitating agents.

Accurate assessment of the nature of the neurosis is one of the best guards against malingering.

Predisposition is one of the most important factors in mental illness, and consists in a susceptibility to disease which remains latent under normal conditions but may be activated by exceptional stress.

Only the very mild cases and malingerers recover after settlement of compensation claims; the more serious cases are not affected.

Medical witnesses often differ in their opinions of cases, and judge or jury should not have to decide between them. Delicate decisions that have to be made by the court should be based on the advice of a properly constituted panel of specialists in neuropsychology.

The Lasdon Foundation Inc. has made a grant of \$15,000 to Harvard Medical School and the Peter Bent Brigham Hospital to support research on the homologous transplantation of human and animal kidneys. The work will be under the direction of Professor G. W. Thorn and Dr. B. F. Miller. In previous investigations on this subject at Harvard the kidney has been transplanted into the subject's thigh and attached to the vessels of the leg. The Harvard workers hope that their studies will also throw light on the related problems of the homologous transplantation of skin and endocrine tissue.

CLOSTRIDIAL MYOSITIS ASSOCIATED WITH INJECTIONS OF SODIUM SULPHATHIAZOLE

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Of the many papers which record the occurrence of gas-gangrene as a complication of drug injection in man we have examined 39, published between 1931 and 1950, but find no reference to the occurrence of this infection at the site of injections of sulphonamide. The case presented here is that of clostridial myositis associated with injections of sodium sulphathiazole.

Clinical Record

A married man aged 54, a butcher and gardener by occupation, was admitted on May 12, 1950, from the casualty department to the medical ward for the treatment of bronchitis. There was a history of angina pectoris of some eight years' standing, and he had been in the habit of drinking six to ten pints (3.4 to 5.7 litres) of beer daily.

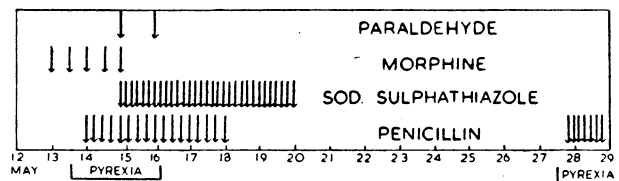


Diagram of events. Each arrow represents an injection.

The day after admission he had a severe haematemesis followed by collapse, for which morphine, $\frac{1}{4}$ gr. (11 mg.), was injected, and eight pints (4.5 litres) of compatible blood was transfused during the subsequent twenty-four hours. On May 14 his temperature rose to 102.8° F. (39.3° C.), early bronchopneumonia was diagnosed, and intramuscular injections of penicillin were begun, 200,000 units being given at intervals of six hours. The pyrexia was maintained during the next day, and intramuscular injections of sodium sulphathiazole were begun, the first of 2 g., then subsequent four-hourly injections, each of 1 g., as a 33.3% solution in apyrogenic sterile distilled water; injections of penicillin and sulphathiazole were made into the lateral thigh muscles. Administration of morphine was stopped on this day, a total of five injections, each of $\frac{1}{4}$ gr., having been given into the arms and the first of two intramuscular injections of paraldehyde, 5 minims (0.3 ml.), was administered. There is no record of the site of injection of the paraldehyde.

The temperature fell to normal on May 16; penicillin was discontinued on the 18th, when a total of 3,400,000 units had been injected; and on the 20th the injections of sulphathiazole were stopped, a total of 32 g. having been administered intramuscularly.

There was steady clinical improvement until May 28, eight days after the last injection, when the temperature rose sharply from normal to 103.2° F. (39.5° C.), the right thigh became uniformly swollen and hot, and an effusion developed into the right knee-joint. The condition was thought to be femoral thrombosis or a deep abscess in the thigh, and four-hourly injections of penicillin, each of 200,000 units, were begun.

No improvement in the general or local conditions occurred, and in the early morning of May 29 the patient woke up, complained of pain in the chest, gave three gasping respirations, and died.

The above diagram illustrates the sequence and timing of events.