

TRAUMATIC NEURASTHENIA.

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TRAUMATIC NEURASTHENIA.

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TRAUMATIC NEURASTHENIA.

Traumatic Neurasthenia is a psychical disorder following nervous shock of traumatic origin the evidences of which are mainly subjective, and are due to the domination of an adverse objective suggestion, accentuated and elaborated subjectively into symptoms and occasionally signs simulating organic nervous disease.

and was accompanied by little if any anatomical change.

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In 1884 Oppenheim published two articles upon sensory disturbances in which he attempted to base the pathological picture upon the sensory disturbance observed at the onset. He rejected Erichsen's view of a spinal causation and maintained a cerebral localization and brought out strongly the functional features of the pathologic pictures.

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In 1886 Charcot definitely established that the entire pathologic condition was functional and psychical and was not based on an anatomical change, thus upholding the views expressed by Page three years previously. The views of Page and Charcot are practically those held at the present day, at any rate with regard to the main features of the functional and psychical origin. About 1890 discussion waxed warm over the point of the special neurologic cause of the pathologic symptoms.

Charcot considered the nervous symptoms arising after trauma as purely hysterical and therefore did not consider that they had any special nosologic importance.

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Oppenheim held that the psychical injury is only in part answerable for the consequences which follow. He agrees that psychical disturbance exaggerates the pain, but

lays greater stress on the physical element in the neuroses and less on that of the nerve prostration than Page.

Following the publication of this treatise there were established two distinct schools holding practically diametrically opposite views..

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One headed by Oppenheim maintaining the functional nature of the pathologic picture but objecting to the view, held by Charcot 's school, that the traumatic neurosis was of purely hysterical origin and in no wise differing from any other form of hysteria excepting in its traumatic origin. Schultze, Jolly, Mendal, and many others however denied the specificity of traumatic neurosis as a disease sui generis as claimed by Oppenheim and preferred the designation traumatic hysteria, traumatic neurasthenia or traumatic hypochondria according to the type of symptoms and course.

The truth as Page and others have pointed out probably lies midway between these views and draws its origin from both.

In later years the question of compensation has been more and more recognised to have stamped the clinical physiognomy of accident neuroses. Here again was a sharp divergence of opinion. Some holding that malingering was a very frequent occurrence, while others regarded it as

unlikely or rare. To-day however most have come to admit the frequency of exaggeration while recognising that a close simulation of the entire pathologic symptom complex is rare. It is now recognised that the psychological genesis of most of the symptoms explains why there are so few purely objective phenomena. Few changes have been found pathologically although Sperling in 1889 called attention to the presence of arterio-sclerosis in a large proportion of cases of traumatic neurosis.

MAIN PHENOMENA.

There is always a history of some accident previous to the appearance of the nervous symptoms, although the severity of the symptoms need not necessarily depend upon the gravity of the accident, for serious symptoms may follow after a very slight injury, fright proving in these cases mainly responsible for the subsequent phenomena. Railway accidents in which we have injury combined with sudden shock and terrifying conditions provide perhaps the most typical cases.

Symptoms may appear immediately after the accident or be delayed for a longer or shorter time. They may also *appear* immediately apparently subside but re-appear again later. The immediate symptoms are those of shock. Unconsciousness may or may not have been present.

The patient may be badly bruised and shaken but if travelling, is usually able to continue his journey. He may be able to continue at work for some days, although his nights will probably be disturbed.

Sleeplessness or sleep disturbed by bad dreams in

which the accident is reconstructed is one of the earliest phenomena, for this he usually seeks advice and is almost invariably ordered to rest in bed. Stiffness and pains of an elusive nature are his next complaint, the pain increasing on movement. The countenance becomes pallid and careworn, he complains of defective memory or loss of power of concentrating his thoughts, he cannot stand a continuous mental strain, owing to confusion of thought. He becomes irritable and fretful, headache, giddiness and tinnitus aurium are frequently present. The body is bent and stiff and there is little natural freedom of movement. The gait is unsteady and he requires the assistance of a stick. Coldness of extremities and tingling are frequently found also tremors. The patient loses weight, vision is frequently impaired, there may be diplopia, or slight strabismus and intolerance of light, retraction of the fields of vision and inequality and sluggish reaction of the pupils. Wasting is after a time frequently present which may be due to withdrawal of nervous stimulus from digestive and nutritive processes, or atrophy from inactivity. The upper and lower limbs are particularly affected, although there is no reaction of degeneration, exaggerated reflexes are usually found particularly at the knee, ankle clonus

(not however true clonus, as it will cease when the patient's attention is directed elsewhere) can occasionally be demonstrated also loss of the plantar reflex.

Disorders of secretion are not infrequent i.e. Polyuria due to loss of motor control, Diarrhoea, Sweating and menorrhagia.

Sexual power is decreased or lost.

At a later stage a complicating condition is that called by Paget ¹⁰ "Neuromimesis", which on account of its tendency to mimic the symptoms of organic disease adds to the gravity of the prognosis in these cases - we may have definite anaesthesia, motor paralysis or even muscular spasm or rigidity. Good examples are seen in the hysterical affections of the knee, hip, and spine.

It is a noteworthy fact that railway collisions rarely produce abortion or premature labour. Although the fear of it will keep up the neurasthenia until the birth of the child.

The main phenomena in Traumatic Hysteria may be briefly summarized as follows:-

Sleeplessness with continuous dwelling on, and reconstruction of the accident. Hyper-sensitiveness to sound, palpitation of the heart when spoken to, a ready flow

of tears, particularly when sympathy is offered. There may also be paralysis or contractions of a limb or limbs, convulsive epileptiform seizures, impairment of common and special sensation, vaso-motor derangements and acute psychical troubles.

The observation of the Neurasthenic is precise, but the Hysterical person is confused and contradictory. In Neurasthenia sensory symptoms are mostly general, in Hysteria they are localised.

Although we have thus recounted the main symptoms of traumatic hysteria and neurasthenia, it must be borne in mind that in many cases the two conditions blend and no hard and fast distinction can be drawn between them.

A E T I O L O G Y.

It would appear that to a greater or less extent shock is the primary causative factor of the train of symptoms following sudden and unexpected trauma.

Shock means lowered or annihilated function of the great nerve centres of the vascular system causing paresis of the heart and peripheral circulation to which is due the external pallor and coldness and also mental enfeeblement consequent on the impaired flow of blood in the brain. The principal feature in railway injuries is the combination of psychical and corporeal elements in the causation of shock in such a manner that the former is always present in its most intense and violent form. All that the most powerful impression on the nervous system can affect is affected in a railway accident and this irrespective of the extent or importance of the bodily injury, in fact, collapse in a railway accident accompanying severe bodily injuries, such as extensive lacerations or fractures- excepting collapse from severe concussion of the brain - is very rarely followed by the train of after symptoms indicative of nervous shock.

The extent of the shock has no bearing on the

extent or severity of the symptoms that follow.

Although those cases following railway injuries are most typical of Traumatic Neurasthenia, any injury accompanied by emotional shock or fright may produce the condition.

As a rule the symptoms make their appearance in the course of a day or two, but they may be delayed for two or three weeks, and in a case quoted they made their appearance early, then apparently cleared up, to reappear in the course of three months with added severity. A possible cause of the frequent serious nervous symptoms following slight injuries may be found in the added severity of the internal (functional) effects - "more frightened than hurt". The primary seat of functional disturbance lies probably in the brain itself and, as in the hypnotic state induced by a profound mental impression, there is a temporary arrest in that part of the sensorium which presides over and controls the movements and sensations of the periphery. Bearing on this is the fact that the nervous structures and connections which have to do with the higher intellectual processes have been most recently evolved and therefore being least deeply organised are least stable.

The reason why all people do not after accident suffer from neurasthenia lies probably in the presence or

absence of a nervous system attuned to neurasthenia (neurasthenic diathesis) thus the occurrence probably points to a previously weakened nervous control, such as might be brought about by the abuse of alcohol, chronic lead poisoning, occupations accompanied by severe nervous tensions (working in intense heat, great noise or with grave responsibility, etc.). Other predisposing factors are the intellectual inferiority of the patient, sympathy of others, and last, but perhaps the most important of all, the anticipation of compensation. The disease may develop acutely after emotions, such as fright, fear, anxiety and rarely anger, these emotions accompanying the trauma or immediately preceding it, and they are most active when simultaneously experienced by many people, as in railway accidents, earthquakes, theatre fires, etc., These violent emotions cause psychical shock even with little bodily injury, and the subjective reflection of a possible severe objective injury on the psychical life of the injured person quickly develops neurosis. The psychical disturbance invariably exaggerates the pain and magnifies the consequences.

5, 11 & 12

It is generally held that the peculiar dazed mental condition following fright (as in a collision) without definite

unconsciousness may be regarded as of the same nature as the hypnotic state. In both conditions the mental spontaneity, will, or judgment is more or less suppressed or obscured and suggestions become easy.

Hypnotism has done much to transform the theory of the duality of the mind into a fact now recognised by a large number of trained observers.^{15,16.} The one has been termed the Objective or Conscious mind and the other the Subjective or Sub-conscious mind. The distinction between the two may be stated as follows:- The Objective mind takes cognisance of the objective world, its media of observation are the five physical senses, its highest function is that of reasoning. The Subjective mind perceives by intuition, it is the seat of the emotions and the storehouse of memory. It performs its highest functions when the objective senses are in abeyance. It is that intelligence which makes itself manifest in an hypnotic subject when in a state of somnambulism.

Still further data has been secured as an outcome of hypnotic experiment for we find, that the Subjective or Sub-conscious mind is constantly amenable to control by the power of suggestion, and also that the Subjective mind has absolute control of the functions, conditions, and sensations of the body.^{16.}

Suggestion may be either from without or from within but probably the latter is the more potent. Auto-suggestion embraces not only the assertions of the objective mind of an individual addressed to his own subjective mind, but also the habits of thought of an individual and the settled principles and convictions of his whole life, and the more deeply rooted are these the stronger and more potent are the auto-suggestions and the more difficult they are to overcome by the contrary suggestions of another. The strongest suggestion must prevail.

The Subjective mind does not reason inductively but deductively and depends for its premises on objective suggestion, hence the objective mind controls the subjective. (a corollary of Liebhault's law of suggestion). At the same time it is recognised that suggestion may be made direct to the subjective mind without the intervention of the objective as is shown by hypnotic experiment. ¹⁵ Thus we may account for those cases in which symptoms of neurasthenia follow fright, etc., without any signs of objective injury.

¹¹ ¹² Both Charcot and Page hold that Traumatic suggestion is really auto-suggestion and that the dazed condition following fright or accident without definite unconsciousness may be regarded as of the same nature as the state of hypnotism,

It may be added that if suggestion is made during hypnotism that suggestion will remain and influence the subjective mind after the hypnotic condition has passed off.
15.

When the disease develops gradually the beginning of the process - the trauma - is acute. There may be neither conscious emotion nor apparent psychical irritation. Pain however, some impairment of function, with certain inconvenience produced, causes the mind of the injured person to dwell on the accident and its surroundings. Sleepless nights and days spent in bed afford him ample time to meditate upon the results actual and possible and to impress these objective sensations on the subjective mind peculiarly attuned to receive and exaggerate such impressions. The mere fact that his recovery is slow, much slower than he expected accentuates his anxiety for his future, also the sympathy of well meaning but usually pessimistic friends, fill him with a wealth of morbid reflections which thrive on their sensational tales and details of previous cases within their knowledge or bred of their imagination. His imagination feeds on these adverse suggestions until symptoms are created or accentuated. In the induced state of hypnotism the suggestion of another may produce all the

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symptoms of neurasthenia, thus the self induced hypnotic state or a cerebral condition akin to it made easy by repetition may pave the way for the self-suggestion of innumerable morbid phenomena. In this state, injury takes the place of oral suggestion, but as oral suggestion is only successful when the higher regions of the cerebral cortex are in the hypnotic state so traumatic suggestion has no influence unless the higher centres are in the same condition as hypnosis or one allied to it. The circumstances of the injury provide the required condition.

Sooner or later the question of compensation is advanced and the fact of the necessity of compensation leads him to take an even more serious view of his condition. He is probably subjected to more frequent and more thorough examinations which tend further to impress him adversely. He considers, or is brought to consider, that these are antagonistic to his interests. It is probably impressed upon him that the object of these frequent examinations is to minimise the gravity of his condition with a view to decreasing the amount of compensation to the lowest possible limit. If the patient is a married man a most depressing factor is ever present at his side in the person of his wife, owing to her natural anxiety, her suggestion is invariably adverse and she will

constantly elaborate his symptoms.

It may be he is advised to try and work on a "light job" and before he starts he is cautioned by his wife and neighbours to exercise great care; failure as a rule follows, and he returns to the bosom of his family and friends to find that he has not belied their pessimistic prognostications. Not infrequently at this later stage in the disease a complicating condition presents itself in which the principal features are a tendency to mimic the symptoms of organic disease (called by Paget neuromimetic disorders). Thus we may have definite anaesthesia or paralysis, some spasm or rigidity. These symptoms are akin to the hysterical affections of the knee, hip and spine. The preceding neurasthenia has attuned the nervous system to an only too facile development of psychical neuromimetic phenomena. The question of compensation and possible subsequent litigation tend to exaggerate and fix the symptoms.

It may be mentioned here that these hysterical symptoms have occasionally appeared immediately after the accident.

Litigation with its publicity and constant reiteration of symptoms and signs increases the potency of the suggestion while what he regards as an attempt to deprive him of his

"rights" and throwing doubt on the genuineness of his claim, leaves him embittered and with a strong desire to make the most of his symptoms which, considering the abnormally increased activity of emotional impressions so constant a factor in the disease, is no difficult matter. According to Grunewald ¹⁴ - "Before compulsory insurance against accident was introduced into Germany Traumatic Hysteria was almost unknown." On the other hand it is possible it may only have been unrecognised and although the potency of suggestion as a malevolent factor in the disease and the part that the question of compensation plays in maintaining this is now fully recognised even Grunewald ¹⁴ does not go so far as to say it is the sole and essential of traumatic neuroses.

The state of nutrition of the body at the time of the accident has a certain bearing on the course of the disease. If the powers of recuperation are not strong, such as in the aged, recovery may be postponed indefinitely. There is another form of traumatic neurosis that occasionally occurs in which the psychical pathogenesis is more uncertain. ²⁰ In these cases the injuries are purely peripheral and may be severe or perhaps only moderately so, but are unaccompanied by any general shock to the body or central organs, and are

not preceded by fright or any emotion of any kind, and although no justification for describing them as neuroses due to auto-suggestion or any similar psychical agency exists there follows motor, sensory, or even trophic changes strictly limited to the region of the trauma. The patient is perhaps totally unconscious of any emotion at the time of the accident but the injury appears to have been propagated from the periphery to the cerebral and spinal centres by the nerve tract. These cases closely resemble hysteria and often follow electric injuries. That an external and subsequent psychical effect is possible even when there has been no conscious emotion at the time of the accident is shown by hypnotic experiments. We know that during hypnosis suggestions may be made direct to the subjective mind without the intervention or knowledge of the objective or conscious mind, and as the subjective mind is capable of reproducing a general set of symptoms when impressed objectively it is possible that impulses from the periphery along the nerve tracts may suffice to provide suggestions to the subjective mind although insufficient to become recognised objectively. The perception and distribution of every sensory irritation depends to a great extent upon the condition of the psychical functions at the time the irritation was conveyed, thus the irritation may be

expected and is met by a brain prepared for it, or is unexpectedly received by an unprepared brain; in this way we get the extremely varying psychological conditions and the varying effect on the mind. The conscious psychological state of the individual has the most important influence on the further distribution and ultimate action of those irritations which affect the sensory sphere. Thus it is that in some cases of trauma, even when accompanied by marked psychological impressions, no visible signs are left on the injured, while in others, sensory and motor changes appear in an affected member, notwithstanding the fact that the injured person has experienced neither fear, fright, nor even pain.

The objective education of a man is a factor to be considered as it always tends to translate psychic symptoms following trauma into organic trouble.

As regards Hysteria, all permanent psychological symptoms are subject to the general principle which dominates the entire symptomatology, i.e. the abnormally increased activity of emotional impressions. Two of these permanent symptoms are-- the entire absence of objective control and the abnormal suggestibility.

P A T H O L O G Y.

Of the pathology of Traumatic Neurasthenia little or nothing is known. There is probably a general depression of nervous force, a dynamic, not a structural change, resulting for a time in manifestations of different symptoms.

Shock, which is such a formidable feature in most cases, and present to a greater or less degree in all cases, means a lowering or annihilation of the functions of the great nerve centres of the vascular system causing paresis of the heart and peripheral ^{circulation} ~~circumstances~~.

(1)
The older writers notably Erichsen held that the train of symptoms following accidents were due to inflammatory conditions of the vertebral column, spinal nerves, meninges, or medulla, or to a condition called by Erichsen cerebral anaemia, however, as all these cases run a very chronic course and usually terminate from some intercurrent disease, post mortem examinations have been rare and in the few cases reported ²¹ no organic changes have been found.

Although the older pathologists refused to admit that there was a psychical side to this condition and shewed

by the different names these symptoms were grouped under - Spinal anaemia, Spinal irritability, etc.,-their belief in their organic origin, yet they were faced with symptoms which they were unable to account for.

²
Erichsen states "It is rather by clinical inference than by positive pathological observations that such a state can be termed one of anaemia, and in this uncertainty as to its true pathology it may perhaps scarcely be desirable to attempt to give an explanation of the method by which such a condition of the cord is brought about". The condition of neurasthenia cannot be produced artificially in animals and therefore one of the greatest aids to the study of the pathology of the disease is lacking.

That Traumatic neurasthenia is accompanied by organic lesions we recognise during life by various clinical signs. Of these, the most important are Babinski's sign, altered electrical reactions, trophic lesions, rigidities, etc., But these organic lesions are super-added to the condition of traumatic neurasthenia and are not a necessary accompaniment to the disease and in fact in the majority of typical cases of traumatic neurasthenia are absent.

As in that type of Insanity in which the conscious mind is disturbed by distorted subconscious suggestions no

post-mortem appearances of organic change are found, so in Traumatic Neurasthenia the absence of such appearances is due to the purely psychical condition in which the subconscious or subjective mind is disturbed by distorted conscious suggestions consequent on trauma accompanied by shock and aggravated by other external facts.

It may be urged that the discharge of no function is possible without at least temporary molecular change, still that differs widely from actual structural lesion.

MANAGEMENT OF CASES.

In considering the management of these cases it is well to divide them into two classes depending on the extent of the development of the objective faculties.

In the class from which a very large number of these cases is drawn - the manual labouring class - it is recognised that the education of the objective faculties has been of the most trivial and superficial kind. In the immense majority education finishes at the age of fourteen years, the child leaving school then with a smattering of facts but with little or no mental training. The highest powers of the intellect have not been cultivated. They are neither trained thinkers nor observers and they have little or no initiative. In fact the objective faculties are undeveloped with the result that the subjective being ill-controlled are unduly active and but too prone to receive impressions which are only too readily translated into fact by an untutored brain governed by a powerful traumatic suggestion.

Under present conditions all circumstances tend to

emphasise and fix the adverse suggestion, thus it is hardly a matter for surprise that a large measure of failure follows the attempt to treat these cases in a satisfactory manner.

In the other, or educated class, the converse obtains, the intellect being highly cultivated the subjective or subconscious element in the mind proportionally decreases in activity until we get intellects which are highly materialistic. In these, objective control is highly developed. This very fact may be the cause of their undoing, for as brain workers it is essential that to continue their work the objective faculties should remain unaffected.

But the course of these cases shows that trauma followed by shock entails considerable mental disturbance at first, the sequence of ideas is lost and the power of concentration of thought weakened. Thus the gravity of the condition is early recognised and the natural anxiety, added to an education which tends to translate psychic symptoms following trauma into organic trouble, constitutes a powerful adverse auto-suggestion.

In these latter cases it is well to take the patient into one's confidence to a certain extent. The transitory nature of the condition may be explained to him. Complete rest from absorbing work, light reading, change of air, travel and

cheerful society, all are factors that make toward improvement.

In the former cases - those of manual labourers - a successful termination is more difficult to achieve and longer delayed. Isolation to a greater or less extent is essential and should be carried out at the earliest possible moment. It is impossible that such cases can remain in Hospital unless Railway or Insurance Companies or other large employers of labour were to endow beds or a ward in a Hospital in the larger centres of industry for the special reception and treatment of such cases. There they would be surrounded by benign influence of cheerful nurses, encouraged to take exercise, their symptoms minimised, their returning activity recognised and encouraged, examinations infrequent, their places at work kept open, and their homes provided for, thus excluding financial anxieties. They would be encouraged to play games and assist in the ward work, in fact the whole routine would provide constant suggestion of recovery. The Weir Mitchell treatment might prove useful, but in the main, the good food, open air, exercise, and occupation for the mind, together with removal from all contact with friends and sympathisers should determine an early and satisfactory result. Later, a stay at a convalescent home at the sea-side, should complete the cure.

In this way a great deal of the litigation which is such an unpleasant and unsatisfactory feature at present would be rendered unnecessary, for employers of labour would have had their cases under the best conditions and in the care of a specialist whose report in the end would be final. It would also do away with the sorry spectacle of the wide divergence of medical opinion and evidence which obtains in our law courts at present.

As the course of the Law stands at present it undoubtedly tends to produce exaggeration in the patient, and no matter the verdict is often unsatisfactory and costly to both parties. They are essentially cases that should not go to law, and the knowledge that the report of a specialist under whose care he had been and who had seen him all along was decisive would appeal to the patient's mind as likely to procure for him a just statement of his case and would remove any cause for exaggeration.

The specialist's report would come before a judge sitting as arbitrator, who would fix the damages.

IV

Case illustrates what can be achieved by a certain measure of isolation and change of air, although this case never developed into one typical of the disease, however it is quite possible that it would have done so had the patient

been left to his own devices.

Cases I, II, & III afford an illustration of the unfavourable course a case may take when isolation has proved impracticable.

In dealing with all these cases we have before us the risk of permanent damage to the stability of the nervous system, consequent on the long continuance of any functional mimetic disorder, therefore it is essential that the gravity of the condition should be recognised and treated early.

C A S E I.

H.C.

MARRIED, AGED 64. OCCUPATION CARMAN.

While driving a coal cart in March /08 was run into by a motor 'bus, the bus striking the rear of the cart and throwing the driver into the roadway. He was quite unprepared for the accident and states that his first sensation was of being shot into the air. He fell heavily on his left hip, and was helped up by one of the crowd, subsequently being placed on an ambulance and removed to hospital. On examination at hospital, no fracture was found, nor was any bruise noticeable, and he states he noticed no bruising either at the time or later. His side which pained him was strapped and he was removed home and put to bed. At first he lay comfortably, but twenty-four hours after the accident he complained of severe headache, not confined to any one spot but distributed over the vertex, temples and occiput. Such was the severity of the pain that the slightest sound aggravated the condition, "nearly drove him mad."

On examination, pain was elicited on pressure over the hip and left side, and both left arm and leg were painful to move. There was no tenderness over the spinal column, and no objective signs were elicited. The headache continued for three days, practically without intermission, during which time he states he did not sleep. Subsequently the pains decreased, and he obtained sleep, which however was broken by dreams of the accident and of falling from a height. From these dreams he would wake up bathed in perspiration. While awake he complained he could not keep his mind off the accident and wondered he was not killed.

During a month spent in bed he gradually improved, he slept better and at the end of the month was able to get up and about, though walking at first proved difficult on account of stiffness of the left leg and hip. He continued to improve during the next two months so much that he was able to walk half a mile without the aid of a stick.

One day, four months after the accident, he complained of a sudden severe pain in both arms, any movement of which made him cry out. He complained also of pain in the back, particularly on straightening himself after bending.

On examination no specially tender spot was found in the spine but there was some tenderness on tapping the

lower dorsal and first lumbar vertebrae. There was also pain in passive movement of the arms, but no tenderness on pinching the muscles. In the course of a week both shoulders and legs became stiff and painful and he noticed that he was getting thinner. The patient moved about rather shakily and with apparent lack of confidence, he was much bent and his face had an anxious careworn appearance. His knee jerks were slightly exaggerated, there was no ankle clonus. At the end of a month - five months after the accident - wasting was apparent in the arms and shoulders and progressed rapidly, it was present also to a less degree in the legs. At the end of August he became practically helpless, he could not lift either hand to his head, nor had sufficient power in his hands to hold a hair brush. No re-action of degeneration was found in the muscles of the arms or legs. The patellar reflexes were present but diminished, there was no ankle clonus nor was Babinski's sign present. The face was much lined and careworn and his wife stated that he appeared twenty years older. His skin "hung on his body" in loose folds, and he presented an emaciated appearance. The pulse was feeble and irregular. Lying on his back on the bed he could scarcely lift either arm, he could however draw each

leg up though rather slowly. Urine was normal and voided quite comfortably and the bowels natural though slight constipation was present. He complained of lack of appetite and found difficulty in getting to sleep and dreaded the dark; but excepting occasional headache, had no pain though he felt "very weak". Sensation was normal in both arms and legs, no hyperæsthesia. There was slight tenderness over the spine. The heart was somewhat irregular, intermitting two or three beats in the minute.

Shortly after this he was seen by Dr. Mott of Charing Cross Hospital, on behalf of the London Omnibus Company, who confirmed the diagnosis of Traumatic Neurasthenia.

A course of Massage and Electricity resulted in a considerable measure of improvement and he was removed to the sea-side in September and ordered to be taken out daily in a bath-chair. He returned at the end of October much benefited by the change and gradually improved so that in March 1909 he was able to get about the house with the aid of a stick and with the support of the furniture. He still looked very careworn and was bent and uncertain in his movements and could not raise his arms sufficiently to dress himself, but he had more power

in his arms, legs and hands and could, though slowly and painfully, put his hands on his head. On examination, the patellar reflexes were found still diminished, there was no muscular tenderness, no reaction of degeneration, no spinal tenderness. His chief complaint lay in the fact that he had no appetite and that he had pain after his food.

He remained much in this condition during 1909, despite a further prolonged stay at the sea-side. His claim for compensation, which had been pending, was settled out of Court in November, and he was satisfied with the amount.

At the end of the year, he was much troubled with breathlessness and palpitation, his heart being irregular, intermitting three to four beats per minute, he had also much gastric discomfort.

In March, 1910, his condition was as follows:- Still lined and careworn in appearance, walks very bent, and with uncertain gait, he feels himself unsafe without the aid of a stick.

He is in no pain and has neither headache nor giddiness.

Pulse 82. Heart slightly irregular. Appetite very

poor, food "lies heavy". Tongue slightly furred, bowels regular, with the aid of an occasional aperient. Sleeps fairly well, but finds it difficult to get to sleep. His legs can carry him about half a mile with the aid of a stick but some days not so far. Hand grips fair but muscularity still poor though much improved. Weight 9st. 7 lbs. Memory poor, cannot remember messages. Pupils react well to light and accommodation. No ankle clonus. Babinski's sign not present. He can now put on his coat and waistcoat, though it requires great effort.

No further change in his condition has taken place up to the present date - September 1910.

REMARKS.

In this case we have the accident occurring suddenly and unexpectedly, conditions which obtain in railway accidents which furnish the most typical cases of Traumatic Neurasthenia. We find also, as in most cases, that the physical injuries were of a comparatively trifling nature - a little muscular strain and some stiffness and bruising, which was not sufficient to cause superficial

discolouration. This case also supports the contention that the extent of the initial shock has no bearing on the severity of the subsequent symptoms, the patient being permitted to return to his home with no complaint further than stiffness and bruising. As in most typical cases the symptoms of the disease appeared in 24 hours and for the next four months the case ran a fairly normal course, the severity of the headaches and the hypersensitiveness to sound, together with the sleeplessness at the onset, indicating considerable nervous disturbance.

The past history did not indicate any tendency to neurosis (neurasthenic diathesis) or to alcoholism, the man having been practically a teetotaler for years.

The careworn appearance became a marked feature comparatively early and as far as I have observed in this and other traumatic cases, is typical of neurasthenia, whether due to trauma or general causes.

His marked improvement at the end of the first month, with returning vigour, diminution of the pain and stiffness and sounder and more refreshing sleep were satisfactory features of the case and led one confidently to predict an early return to active occupations. The information that he had suddenly been attacked by severe

pain in the arms was thus both unexpected and disappointing.

On enquiring closely into the course of events immediately preceding the attack, I found that three or four days previously he had a conference with some friends - themselves workmen - and that the question of compensation was discussed. I also gleaned from his wife - who, while on this subject was of an aggressive disposition - that it was impressed upon him and also on her, that the employers invariably tried to make out "you are not hurt." It seems to me that this is more than mere coincidence and in default of any other apparent cause, may be accepted as being responsible to a greater or less extent for the advent and elaboration of the subsequent symptoms. Up to that time shock had been recovered from and that the sub-conscious suggestion of injury had considerably diminished was shown in his improved physical condition.

That a strong, healthy labouring man can be brought down to such a state of emaciation and complete helplessness in so short a time, without a single symptom or sign of organic disease, accentuates the importance of the adequate recognition of a sub-conscious element in the mind, an element which has very great controlling power over the functions of the body, and yet is amenable to suggestion from the conscious mind of the patient himself,

or by outside suggestion. If then a grave train of symptoms follows adverse suggestion, beneficent suggestion should equally prove a powerful curative factor, providing that such suggestion was sufficiently powerful to combat the adverse suggestion already present, plus the subjective symptoms created by such suggestion.

The subsequent course of the case presented the condition of neuro-mimesis, verging on true Traumatic Hysteria.

Vision was practically unaffected in this case and there was no limitation of the fields of vision. The gastric symptoms were a marked feature in the case, although there was no previous history of dyspepsia. A condition of atonic dyspepsia seems however to occur in a large proportion of these cases, the nerve supply to the stomach doubtless suffering along with the general nerve depression.

The bent and stiff attitude and the shambling and unsteady gait are also distinctive of the condition and with the anxious, careworn expression of the face, combine to present a picture which alone is almost pathognomic of Traumatic Neurasthenia.

C A S E II.

JOHN B. LABOURER. AGE 66 YEARS. MARRIED.

While employed in loading a cart on the 17th of April 1909 was injured by the fall of a piece of stone "as large as a pail". The stone fell on the lower part of his back when he was stooping, from the top of the cart, a distance he reckoned about ten feet. He was knocked down and lay in pain for five minutes, which was aggravated by any attempt at movement. Finally he was taken into the cart and conveyed homewards, but finding the jolting very painful, he managed to walk the last half mile. He passed a sleepless night due to the pain in the back, which extended as far as the back of his head. He stated his head felt as if it had been hit with a stick.

Next morning he could not get up without assistance, nor get his clothes on, so returned to bed and sent for the Doctor.

On examination, no mark of a bruise was apparent, but there was considerable tenderness over the spine, below

the 5th Dorsal Vertebra, which was the point of impact of the stone. The patellar and other reflexes were normal, the bladder and bowels unaffected, and the other organs normal.

Patient was in bed for a fortnight, part of which time massage with stimulating liniments was ordered. At the end of that time patient could get up and dress, without help, but complained of much pain whenever he attempted to straighten his back. He could walk with the aid of a stick but held his head thrown forward and the back bent, knee jerks present slightly diminished. He complains of pain all along the Spinal Column to the back of his head; he says the pain often passes through to the breast in front. His most comfortable position is leaning to the right side whilst seated and if standing he also finds relief from leaning to the right and pressing on the sternum with one hand. Weight is 11 st. which is just six pounds less than at the time of the accident. The patient also complains of "sleeping badly", pain in the back of the head interfering with his rest. He is not troubled by bad dreams and the appetite is fair.

Four months later, during which time the patient had done no work, but had been examined by other medical

men at frequent intervals on behalf of his employers, the condition was as follows:-

Patient walks slowly but with steady, if slightly shambling gait. The body is bent and the face is somewhat anxious and careworn. Pain still complained of along the back to the head, especially acute if he attempts to straighten his back. When asked if he noted any improvement stated he was no better. Had made several efforts to work in his garden but found "his legs shaky" when he stooped, he also felt inclined to "pitch forward". He stated that he had tried to lift a pail of water but failed as "the pain in his side made him feel as if he had no strength." His memory is good. Vision unaffected, knee jerks normal, appetite fair. His one complaint being that he is no better - that he cannot straighten his back or lift anything without pain.

The patient was ordered massage which was carried out by a trained masseuse, this however failed to effect any improvement, and the case remains in statu quo at the present date September, /10.

The patient has worked for the same firm of employers for many years and they testify that he has been regular, sober and industrious. He has been on half

pay since the accident, but for some months the question of a lump sum as compensation has been mooted.

There is no family history of Phthisis, Syphilis or Neurasthenia and the patient has been a healthy man all his life.

A case of this kind might be considered as one of Traumatic Lumbago. The symptoms were mainly confined to the back and there was little or no affection of the special senses. The absence of signs of bruising is noteworthy, as a blow of that description would usually result in extensive discolouration. The lack of external sign of injury would appear to be an unfavourable omen and it is conceivable, reacts injuriously on the mind of the patient inciting him to exaggerate the subjective symptoms in order to make up for the deficiency.

In this patient, as in most, one constantly hears the wonder expressed that he was not killed, and if in the mind the accident was so nearly fatal, it is inconceivable to them that any but a severe injury can remain. Any attempt

to overcome this suggestion must, to be of avail, be constant and impressive and as a medical man is now placed - seeing his patient only on comparatively rare occasions - it is impossible to carry out successfully unless the patient's immediate relatives and surroundings are enlisted on the side of the doctor. It is comparatively rare that as in Case IV, the friends are able to intelligently grasp and carry out the line of treatment. Objective treatment they are used to, and can understand, but subjective is somewhat beyond them.

Sleeplessness, headache and pain in the back were the earliest symptoms, the former which continued for some time, denoting considerable subjective activity. Stiffness, tenderness, and pain simply pointed to back strain and with a view to conveying that impression to the patient's mind massage was ordered early.

During the fortnight the patient spent in bed there was no trouble with micturition and the bowels acted well. Despite the tenderness over the lower part of the spine there were no signs of organic spinal disease. The patient did not waste to any appreciable extent.

Dreams of the accident were not a feature in this case.

None of the special senses were affected.

The question of compensation is still unsettled and litigation is probable. That this is affecting the case adversely is undoubted and I am assured that until this is settled it is futile to look for further improvement.

The testimony of the patient's firm does not lead one to suspect him of malingering, although all the symptoms are purely subjective; also his general appearance is that of a neurasthenic, the anxious facies, bent body, and slow shuffling gait. That he is afraid of any physical effort is undoubted and before he makes it he is convinced before hand of its futurity.

This would be a difficult case to present satisfactorily before a jury and it is conceivable would lead to wide divergence in views between medical witnesses.

C A S E III.

C.T.S.

Labourer. AGE 43. MARRIED.

In May 1909, while walking to his home along with a companion about 9.30 P.M. he was knocked down by a cyclist, who passed on without waiting. The cycle caught him in the "small of the back" and pitched him forward on to his head. He was carried home and remained unconscious for three days. His forehead was grazed and bruised. The accident occurring on Friday evening, he regained consciousness on Monday morning. He remained in bed for the next ten days, complaining of headache and "heaviness in the head", sleeplessness and bad dreams in which he frequently had the sensation of falling. After ten days he was advised to get up and move about. At that time the headache was less severe and more at night than in the day time. He complained also of pain and stiffness in the "nape of the neck" and giddiness, also of "weakness" (want of power) in the muscles of the

neck and shoulders. His hands trembled and he felt sick, though was not actually sick. On examination the patellar reflexes were found to be exaggerated. No ankle clonus, and Babinski's sign not present. No anaesthesia or hyper-aesthesia found. Pupils unequal, right being slightly dilated. Sense of smell decreased considerably. Hearing unaffected. Speech somewhat thick and indistinct since the accident. The gait is uncertain and the body bent forward. His expression is anxious and careworn. The attitude is stiff, patient being apparently afraid to move freely and the head, particularly, is held carefully steady.

Two months after the date of the accident, the patient was advised to try light work. The attempt was not very successful, as he could not go up a ladder without an increase in the giddiness, also he found that bending gave him pain in the head and back of the neck, and he felt an inclination to pitch forward. He still speaks thickly and indistinctly, and the slightest excitement, as in medically examining him, makes him tremble. Pupils unequal, knee jerks exaggerated. He sleeps better, but finds it difficult to get to sleep. He has done light ground work, but can only work very slowly. Patient states he feels better at work, as

thinking over his condition makes him worse and starts him trembling. Sense of smell almost entirely lost. Left field of vision diminished.

No further improvement has taken place in the last year, during which the patient has found it very difficult to obtain employment, a fact which has proved an additional cause of anxiety, also the fact that he is unable to get any compensation for his injury, prays on his mind.

His present condition in September 1910 is as follows:- He states that he is not getting any better. He complains of occasional pain in the head and neck, especially when he stoops, also of pains in the back coming through to the chest. He complains of indigestion and frequent sensations of nausea and takes hot water to try and bring on sickness. Trembling of the hands is troublesome and he finds sleep difficult and has much restlessness at night. Giddiness is still very troublesome, especially on stooping, sense of smell is almost completely lost.

There is no tenderness on tapping the spine or head, but pain is elicited on moving the head.

In appearance, the patient is rosy cheeked,

but walks with a stoop. His expression is anxious. Speech is thick and indistinct. Pupils unequal. No area of anaesthesia or hyper-aesthesia, knee jerks exaggerated slightly. No ankle clonus, muscularity good. Carries himself rather stiffly and the gait is somewhat shuffling. *Bobinski's sign not present.*

There is nothing in the previous history of this patient pointing to a neurasthenic tendency. He has always been healthy and only had one accident previously - a fall on one knee, followed by synovitis, which kept him from work for two months.

There is no phthisical family history, and no history of syphilis, however he has two brownish scars on the skin ^{of the leg} which he states are the marks of two ulcers that he had five years ago. He has five children living and born healthy, his wife however has had one miscarriage - the second child.

In this case again we have the conditions of accident usually associated with the subsequent development of Neurasthenic symptoms. Not only was the

shock on an unprepared mind very great, but the physical disturbance was also very considerable. Here again we have the patient recovering consciousness to "wonder he wasn't killed". This type of case also accentuates the futility of treatment of a purely expectant nature or confined principally to the physical ^{condition} ~~constitution~~. Headache, sleeplessness, bad dreams and mental confusion may be taken to be the classical symptoms pointing to the onset of Neurasthenia and they were early complained of in this case. They are subjective symptoms, indicating subjective over-activity, impelled to further effort by the adverse suggestion of the accident.

Ten days rest in bed may be followed by physical, but apparently not by mental improvement, for besides the fact that it is almost impossible to ^{control} ~~control~~ the mimical suggestion, we have the constant presence of a nurse - the wife - whose natural anxiety makes for an environment of gloomy foreboding.

Again, the patient was worse at night, when he had more time to think, as also later when lack of work kept his objective faculties unemployed.

Just as so many patients complain of loss of

memory when the condition is in reality one of difficulty in concentrating their thoughts sufficiently to recall events that have passed, so the physical weakness complained of by this and other patients may be taken to be due to failure to concentrate the mind sufficiently to obtain a combined and synchronous action of the muscles of the body, in fact there is born a lack of physical confidence that time and fruitless effort but accentuated.

There was no spinal tenderness at any particular spot, but fleeting pains and weakness. Complete loss of the sense of smell, which followed only some months after the accident was present in this case, and the vision was also affected, the field of the left eye being diminished. Speech was also notably indistinct, the more so as soon as the patient became excited, indicating considerable decrease of the patient's objective control.

The general appearance of the patient was also typical - the anxious careworn expression of the face, the body held stiffly bent, and the gait uncertain and shuffling. The patient complained also of indigestion,

which sooner or later manifests itself in the majority of cases and is particularly unresponsive to treatment (see Case I.).

The tremors of the hands, in this case most marked, especially on the slightest excitement, denoted considerable nerve depression and lack of control.

Wasting was not a marked feature, despite the dyspeptic condition.

It is worthy of note that the question of compensation has not furnished the patient with any motive for exaggerating the symptoms, he has nothing to gain, but everything to lose, by a continuance of the condition. Despite that fact, up to the present - September 1910 - he has shown no improvement.

The patient has been treated by drugs - Pot. Brom. Mixture and Iron and Strychnine mixture, by change of air and by light work.

C A S E IV.

TOM J. BUILDER'S LABOURER - AGE 58 - MARRIED.

On the 18th April, 1910 while at work repairing a house was struck on the head by a falling brick. The brick fell from a height of about 18 feet, striking the top of the head and inflicting an incised wound 2 in. in length.

He fell "like a log" and immediately lost consciousness. I was called to the work to see the patient as "he was in a fit."

I found the patient in the throes of an epileptoid fit. The convulsions were severe and considerable effort was required to prevent the patient from injuring himself. He was frothing at the mouth, the froth being blood-stained, and it was found that he had bitten his tongue. The wound in his scalp was subsequently cleansed and four stitches inserted and the patient was removed to his home in a cab. I saw him three hours later and his wife stated that he had been "dazed and heavy". He complained of pain in the head and severe headache, which the light aggravated.

The patient had served in the Army, both at home and in India, but had been discharged after six years service on account of Epilepsy. There was no history of syphilis. Since his discharge 30 years previously his health had been fairly good, the epileptic attacks decreasing in frequency, he having been completely free from them during the last five years. His family history was good, his parents being free from any manifestation of nervous complaints.

The day after the accident he complained of severe headache, dizziness and confusion, also of nausea but no actual vomiting. He had spent a sleepless night. He was ordered rest and visitors were forbidden.

Seen again on the third day his condition was much the same - his sleep was much disturbed by dreams chiefly of falling and severe headache. On examination, the scalp wound was found to be clean and healthy. Pupils were normal. Patellar reflexes were exaggerated. No ankle clonus. Pain was complained of in the head and the neck felt stiff, the pain was much greater on movement. There were tremors in the hands and giddiness even when lying down was present. The feeling of nausea was persistent.

It was impressed upon the patient's wife (a most sensible and capable woman) that no visitors either from among his fellow-workmen or his employers were to be admitted, and that on no account was she to discuss the accident with him, or to encourage him to do so. Also that she was to be cheerful and make as light a matter as possible of the accident, laying stress only on the cut on his head and the fact that its clean and healthy appearance pointed to a speedy return to health and work, in fact that she was to keep his mind interested in the scalp wound to exclusion of his subjective symptoms.

A week after the accident the stitches were removed, the cut having healed by first intention. He was ordered up and encouraged to move about the room. He still found sleep difficult but the headache was less severe. He complained of stiffness in the neck and mental confusion and replied to questions slowly and with apparent difficulty. His wife was told to give him little things to do in the house and that he was to be encouraged to exercise his limbs.

A fortnight after the accident, he was found to have improved. Speech was still slow and he appeared

to find it difficult to get the word he wanted. His gait was halting and rather uncertain every now and again he sought the furniture for support. The knee jerks were exaggerated and his hands trembled and he stated he felt very weak and that "the least push would send him over." There was less nausea and he slept better, having fewer dreams. Pupils reacted well to light and accommodation and were equal. Headache was still present but the attacks had decreased both in severity and frequency.

He complained that his wife "would not bother" to hear about the accident, but he admitted that he was better. His wife was ordered to take him out for walks but warned against permitting loitering or any discussion with friends.

He continued to get stronger and at the end of a month after the date of the accident, was sent to a convalescent home. He was assured that his place at work was being kept open for him, and that his employers were meeting all immediate financial necessities.

He remained at the home for a month, and came to see me the day following his return. He had greatly improved. He slept and ate well. No nausea and his head

only ached when he stooped. His gait was steadier and he spoke more quickly and decidedly. He stated, however, that he still felt "weak" and was easily tired and was quite unfit for a day's hard work, also that he feared his employers would not take him back. He thought that if he waited a little longer and "rested" he would gain strength. I explained to him that exercise was far more beneficial than rest and that he might as well receive payment for taking that exercise as not. I assured him that he could easily manage light work and that his employers were willing to find it for him. I then gave him a letter to his employers, in which I explained that if they failed to find him something to do the man would become a neurasthenic and would end in becoming a burden to himself and a considerable financial loss to them. Armed with this letter he went from my house to the works and was straightway given light work.

I met him six weeks after he started work and he stated that he felt well and was getting on to his usual work. His speech was normal, his gait steady, and he slept and ate well. Excepting that he received pay while he was off his work he neither got, nor does he look for compensation.

Five months after the accident he is well, and shews no neurasthenic symptoms.

Perhaps we cannot strictly claim this case as one of Traumatic Neurasthenia, nevertheless I am certain that had it been left to follow the ordinary course, it would speedily have developed into one. Many of the primary unfavourable symptoms were present - Sleeplessness, bad dreams, mental confusion, severe headaches, photophobia, nausea, stiffness of the neck muscles, tremors of the hands and weakness, and later uncertain gait, giddiness and halting speech.

The patient's previous history of functional nervous disease was also in favour of a neurasthenic development.

The primary aim in treating this case was to surround the patient with a beneficent influence, to minimise his subjective symptoms and to fix his mind on his objective injury which, as it improved, would afford a vigorous suggestion of cure. It is however

very rare that one can, in the person of the wife, have so capable and intelligent an assistant. To seclude the patient from the injurious commiseration of well meaning friends and frequent discussion with them of the accident and its sequel, with the additional subject of compensation for the injury, is a very difficult matter and impossible without the co-operation of the wife or nurse.

But that success may follow treatment on these lines I am confident and is demonstrated by the result in this case.

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