tating the nervous affection, a predisposition to which already exists. If an epileptic is found to have a refractive error, and if a correction of this error results in a cessation of the attacks, the treatment cannot be regarded as valueless because the trouble ultimately returns. It should rather be regarded as a proof that reflex irritation is capable of precipitating the attack, and should lead to a careful search for other possible exciting causes.

Clinical Department.

A CASE OF FUNCTIONAL MONOPLÉGIA IN A MAN, DUE TO TRAUMATISM: RECOVERY.

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THE case which we are about to report should be of interest to the general practitioner as well as to the neurologist, because it shows the degree to which paralysis may develop after an injury and yet be functional, and the possibility of recovery from such a condition. The case is also interesting in many of its details, being a typical example of so-called hysterical or functional paralysis of the type made classical by Charcot. The patient met with the accident in the following way: He was standing on a board which was lying upon the ground when one of the derricks of the new court-house fell, striking one end of the board and tilting the other end violently into the air. The man was thrown over backwards and received a violent shock although no external signs of injury at the time could be detected. The date of the accident was November 9, 1887.

The physician who saw him immediately after the accident, stated that the patient was brought to his office on the back of another man, and that he (the patient) said he had been hit on the leg and back and he could not move his leg without pain. There were no visible wounds on his body.

Dr. Blake saw him one month later; at that time he was in bed. There was entire loss of power and sensation in the right leg, and he complained of distress and pain in his stomach for which he required opiates. This condition had existed since the accident, but the gastric symptoms about this time were worse.

He was seen by Dr. Walton April 22, 1888, five months after the accident. Dr. Walton's notes, which he has kindly given me, show that his condition at this time was practically the same as when seen later by the writers in consultation, excepting that pain in the stomach, headache, and pain in the right leg and back were more prominent symptoms, and were said by the patient to be more severe than immediately after the accident. Dr. Walton also noted an area of numbness in the lumbar region. This was not afterwards noticed, if present.

The writers found his condition January 30, 1889, fourteen months after the accident, to be as follows: The right leg was paralyzed. This paralysis was absolute, or nearly absolute, so that he had no control over it whatever. There was also complete loss of the tactile sense and of the sense of pain from the knee down. The most severe pricking and pinching was not felt, and the strongest faradic current was only

slightly appreciated on this part of the leg. The man walked with crutches, dragging his right foot along the ground. The muscular sense of the right leg was also lost. More careful examination, however, showed that the disability was more extended than this, and although the paralysis and anæsthesia appeared to be limited to the right leg there was a general weakness of all his muscles more marked on the right side, though not amounting to absolute paralysis. And although the absolute anæsthesia was sharply limited in a typical way by a line at the level of the knee, yet, when tested by the æsthesiometer, it was easy to make out that there was a blunting of the sensation over the whole right side. On the front it was limited by the median line of the body (limiting line of the back not determined). More than this, there was impairment of all the special senses, the impairment being more profound on the right side. There was great loss of acuteness of vision in both eyes, so that he was obliged to hold a watch and large printed letters close to his eyes to see. There was absolute loss of the perception of colors in the right eye, and the left only recognized red and (temporarily) green. There was moderate limitation of field of vision in both eyes. The hearing of the right ear was about $\frac{1}{8}$ and of the left $\frac{1}{8}$ tested with the watch. The drums were normal.¹ Taste was blunted on the right side of the tongue and smell on the right side of the nose.¹ His general condition was that of great debility; he was pale, anæmic and generally weak. He was very easily tired, as, for example, by the examination.

Dr. C. F. Folsom also saw this case in consultation with the writers and all agreed it was one of hysterical paralysis. It may be here mentioned that the man was in no sense of the word hysterical or emotional in the popular sense, a condition which is often thought to be essential in this form of paralysis.

Our reasons for diagnosing functional and not organic disease were as follows: Although there was loss of the plantar reflex on the right side, the cremasteric and abdominal reflexes were present and the knee-jerk, contrary to the customary condition in organic disease of this duration, was absent on the right side, although present feebly on the left. Nor was there any rigidity or spastic condition of the paralyzed limb, but the leg was limp and flaccid. It will be remembered that a monoplegia due to organic cerebral disease must be caused either by a very limited lesion of the internal capsule or by disease of the cortex; in either case, when such paralysis is absolute, and after it has continued for any great length of time, descending degeneration takes place along the motor paths and a spastic condition of the limbs result with increase of the deep reflexes.

The gait is also characteristic owing to the spastic condition of the leg. If this case were to be attributed to such cerebral disease the implication of the special senses would require its localization in the neighborhood of the internal capsule. But lesions of this region do not produce amblyopia of both eyes, but hemiopia. This is due to the involvement of the optic radiations, that is, the prolongations of the optic nerve on their way from the optic thalamus to the occipital lobes.

Although there is much dispute amongst physiologists, whether there is any region of the cortex, de-

¹ This is stated from memory, no note having been made at the time though these particulars were included in the examination.

struction of which produces amblyopia in both eyes, and although Ferrier maintains that lesions of the angular gyrus has this result in monkeys and in dogs, there is no clinical evidence that such is the case in human beings or that when such amblyopia occurs it is not due to functional disease. The way in which this man dragged his foot was also very characteristic and the absence of paralysis of the face, though not of great importance, had some significance. It is an interesting fact that, although there was no atrophy of the paralyzed muscles, they *did not respond as well to the faradic current as did those of the sound leg*. As a suit for damages was in progress, it was agreed, in order to eliminate any suspicion that might be raised regarding malingering, that the patient should be etherized. He submitted to this test, but no movement could be detected in the paralyzed muscles. A verdict was given by the jury for \$6,000.

Shortly after the trial the patient sailed for Italy. It so happened that a friend of the claimant and one of the witnesses also went to Italy about this time. A short time ago she returned and reported to me that she had been to see the patient at his home and found him apparently perfectly well. She said that they had taken long walks together, climbed hills, etc.; that he had recovered the loss of his eye-sight and was practically well. She said that he told her that his recovery began to take place shortly after his arrival and was rapid. This was about three months after the settlement of the case.

Cases like this one are not very uncommon and form quite a percentage of the cases that come into the courts. The claim is generally set up that they are due to organic disease and that they are incurable. The ending of this one illustrates the possibilities of a favorable issue in a comparatively short space of time, although it must not be denied that many such cases persist in *statu quo* for a great length of time.

ADDENDA.

The skin of the right leg was colder to the touch and by the thermometer than that of the left. The grasp of the right hand ranged from twelve to twenty degrees, of the left from twelve to thirty, by the dynamometer. No ataxia. Both thighs and legs measured the same. The left eye perceived yellow and green as white or light shades, blue and violet as black. He complained of steady dull pain in the abdomen between epigastrium and sternum.

Reports of Societies.

BOSTON SOCIETY FOR MEDICAL IMPROVEMENT.

G. G. SEARS, M.D., SECRETARY.

REGULAR Meeting, Monday, November 9, 1891, the President, DR. FREDERICK I. KNIGHT, in the chair.

DRS. P. C. KNAPP and ABNER POST reported

TWO CASES OF TREPHINING FOR TRAUMATIC EPILEPSY.¹

DR. JAMES J. PUTNAM read a paper on
THE RELATION OF EPILEPSY TO INJURY OF THE HEAD.²

¹ See page 5 of the Journal.

² See page 1 of the Journal.

DR. J. C. WARREN: I think the gentlemen who have already spoken have covered the ground so thoroughly that I have nothing special to say on the general subject.

From the surgeon's point of view the question of interference at the time of the injury is one, of course, of great importance, particularly after what has been said by the gentlemen this evening. We see what is possible to result from local irritation, and we have got to determine in a case whether there is sufficient local trouble which is likely to remain and be progressive afterwards to authorize us to interfere. I do not feel, as a result of my experience, authorized to interfere in cases of simple fracture, even if there are some localizing symptoms at the time, unless those symptoms have a certain amount of permanency showing perhaps the presence of clot underneath the point of injury. But if there is any depressed bone, it seems to me that I should not hesitate to interfere in any case, whether there were localizing symptoms or not. It seems as if under those circumstances one ought to make an exploratory incision through the bone and see how much injury there has been to the inner table and perhaps to the membranes of the brain. We may have little or no trouble, but we have done little or no harm to the patient, removing simply a button of bone. We may have a greater amount of injury to the inner table than is apparent to the outer table, and may have one of those sharp points which is going to be a source of meningeal and perhaps cortical irritation. It is not necessary in many cases to have depression of the inner table in order to produce considerable irritation. We may have persistent headache and perhaps symptoms pointing to meningeal irritation and perhaps irritation of the brain itself as a result of direct injury to the bone, not simply a contusion of the bone, but perhaps a depression of the outer table. We may have a localized osteitis, which may communicate itself to the meninges, and may be the result of thickening of the bone and some dural irritation, which may lead subsequently to the necessity of an operation. I have such a case in mind where a boy was kicked by a horse, and where there were two depressions something like those shown in the button Dr. Post has removed, and with some irregularity in the bone. In this case there was persistent headache of such character as to prevent the young man from pursuing his studies, which has been entirely relieved for a year now by removal of a button of bone. The dura was found adherent to the bone at the point of trephining. Possibly in those cases there is some anchoring of the brain, that is, adhesion of the brain to the dura, and irritation every time there is change of the volume of the brain, due to variation in the circulation or whatever movements are possible. That condition known as anchoring of the brain gives rise to considerable irritation, and is one to be thought of when we have to settle the question of an operation.

In regard to the details of the operation, they are so familiar that I think there is not much to be said. Dr. Post has already described that. I would merely mention the points in which I have acted slightly differently. I am in the habit of suturing the dura. I do not know whether in some cases hernia of the brain might result if this were omitted; but it brings the parts back perhaps a little more to their natural condition than if suturing is not done.

In regard to the replacement of the bone, I have done that in one instance only in these operations,