

marked in the little finger. The first and middle fingers are comparatively straight, though they cannot be moved from side to side by the interossei. Flexion and opposition are the only movements possible in the thumb.

The accompanying illustration, drawn from the second case, represents fairly the left hand in each of these cases, and is seen to be practically that of ulnar paralysis. No treatment was advised, on account of the long standing of the case.

It would seem that these cases fall rather under the head of neuritis than under any other class.

The first of the two patients worked almost altogether at the lathe, and the second worked there a great part of the time, though he also did jobbing work outside.

Judging by the constrained position of the left hand in using the lathe, as illustrated by both patients, it seems probable that this is the part of the work at fault. It is certainly improbable that the metal worked upon has any bearing upon this affection in a toxic manner, especially as the trouble is purely limited to the left hand. Whether the fault lies simply in overstrain of the interossei and lumbricales or in neuritis set up by the muscular pressure exercised on the ulnar nerve when put upon the stretch by the flexion of the elbow, it is hard to say. If the former alone, it would seem that all should be affected and the hand assume rather the typical claw shape common in progressive muscular atrophy, instead of the first two fingers being straight, as in ulnar paralysis, through the exemption of the first two lumbricales, supplied by the median. The atrophy is too marked to admit of its classification under occupation neuroses. Its course would seem to be to reach a maximum in about four months, but to progress no further.

Whether this affection is allied to the multiple neuritis (probably toxic) among brass-workers, reported by Suckling,<sup>1</sup> is questionable.

### THREE CASES OF TRAUMATIC HYSTERICAL PARALYSIS, OF TWENTY-NINE, TWENTY-EIGHT, AND TWENTY-NINE YEARS' DURATION RESPECTIVELY IN MALES.

A CONTRIBUTION TO THE PROGNOSIS IN TRAUMATIC NEUROSES.

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HOWEVER much opinions may differ amongst neurologists regarding the nature of traumatic neuroses, still greater difference of opinion exists concerning the prognosis in such affections. While some believe that

<sup>1</sup> British Medical Journal, December 15, 1888.

the tendency of all cases is toward recovery, and that the great majority do recover at a comparatively early period after the cessation of unfavorable surrounding influences, such as litigation, others maintain that the tendency of the affection is in the opposite direction, and that the pathological condition disappears, if at all, only after a prolonged existence.

I therefore wish to put on record three cases, two of which have already persisted twenty-nine years, and one twenty-eight years, as instances of the extreme length of time that such disabilities may persist, and that without obvious external cause therefor. These cases are the more remarkable because they belong to the so-called hysterical type, are of the male sex, and have, so far as can be judged, maintained their original form without the development of secondary pathological conditions.

One of them is an example of hysterical hemianæsthesia and hemiplegia, and two are instances of monoplegia.

I have already reported,<sup>1</sup> in conjunction with Dr. John C. Blake, a case of hysterical monoplegia of very severe type, which recovered about three months after the conclusion of the suit for damages, and which, therefore, represented the other extreme, or the possibility of rapid recovery.

The notes in two of the three cases are not as full as is desirable, but, nevertheless, I think I am justified in saying that, notwithstanding the incompleteness of the records, the cases were examined with sufficient care and detail to put the diagnosis beyond reasonable doubt.

*CASE I. Hemiplegia and hemianæsthesia of twenty-nine years' duration.*—The patient was first examined May 12, 1886, and again five years later—March 11, 1891. The area and depth of the *anæsthesia* at the time of these two examinations showed marked differences. At the first examination the absolute loss of the sense of touch and of pain was limited to the left arm and leg. In the arm it extended from the hand upward to a limiting line as high as the middle of the upper arm, and in the leg as high as the middle of the thigh. Over the remainder of these limbs sensation was "somewhat" diminished only; over the body sensation was apparently normal—at least my notes do not mention any defect. At the second examination *anæsthesia* and *analgesia* had so far increased that it was absolute over the *whole left* side, with the exception of the face and palmar surface of the hand, where the defect was not absolute. The thermal sense was impaired over the same region. Over the scrotum and penis sensation was normal. In the median line of the body the *anæsthetic* was separated from the sound half by an intermediate zone about three-fourths inch wide, over which sensation was impaired only.

*Paresis.* The strength of both arm and leg (left) is described as "weak" at both examinations, but not so much so but that considerable use of these limbs was retained. There was no paralysis of the face or tongue, nor was there any *rigidity* or *atrophy* of muscles.

<sup>1</sup> Boston Medical and Surgical Journal, January 7, 1892.

*Reflexes.* At the first examination the right knee-jerk was feeble; the left was normal ("not exaggerated"). At the second, the reverse obtained—i. e., the left was slightly diminished compared with right; both were within normal limits. The *cremasteric* was present on both sides (1891), the plantar absent on both, and neither foot was ticklish (1891). (This was ascribed to his having had both his feet frozen during the war, since which accident the soles of each had felt numb.)

*Vision and hearing.* He was slightly deaf, and vision was impaired on both occasions. The defect of sight was accounted for by the presence of cataract in both eyes.

The following was noted at the second examination, which was the more thorough of the two: Field of vision, *tested by the finger*, not noticeably limited. Hearing, tested by watch, showed R. c/18, L. o/18; by voice, nearly absolute deafness in left, decided deafness in right. Right drum moderately retracted; left drum was seen to be decidedly opaque and retracted. *Taste and smell* were diminished or abolished on left side.

The patient stated in most positive terms that his sight, sensation, and strength (left side) varied from day to day. Some days he had fair use of the arm; on others, he could "not raise the left arm at all."

The origin of his disability dated from 1862, when in battle he was struck on the left side by a piece of shell, or some large missile. The force of the blow was broken by his blanket—rolled up and slung around him, and the skin was not injured beyond a black-and-blue spot, which the nurse told him could be seen below the left shoulder-blade. He was knocked unconscious, and sent to the hospital. His left side was "paralyzed immediately after the accident, and has remained so ever since," though it is better now (1886) than it was.

CASE II. *Functional paralysis of the left arm, following gunshot injury; duration, twenty-eight years; death from cancer.*—The examination, of which the following are the notes, was made December 1, 1886: "There is complete *paralysis* of all the muscles of the arm and hand from the shoulder down, including the deltoid. There is slight *loss of sensation* over the whole arm. There is *no atrophy* (degeneration), although the muscles are softer to the touch than those of the right arm." There was *no rigidity* or contracture of the muscles. My notes do not mention the condition of the reflexes, although I am certain they were carefully examined, and not found to be increased. The case was a typical one of *flaccid paralysis*. Although the arm was possibly smaller than the right, as would naturally result from disuse, it did not present that atrophic appearance so characteristic of paralysis from injury of the peripheral nerves, and which is so easily recognized.

The condition of the arm followed immediately upon a gunshot wound inflicted at the battle of Gettysburg, July, 1863. The ball entered the left arm between the upper end of the belly of the biceps and the tendon of the deltoid, and passed through the bone upward and backward. From this it will be seen that the wound was not so situated as to account for the paralysis and loss of sensation. Aside from the paralysis of the muscles below the wound, it could not possibly account for the paralysis of the deltoid.

It should be said that the condition of the face and legs was normal.

A functional paralysis would seem to be the only rational explanation of the case. The subject suffered from time to time from fainting or dizzy spells. On two occasions he was found lying on the ground uncon-

scious. The unconsciousness lasted about two hours. No one seems to have ever observed anything of the nature of convulsions at these times, and the attacks are said to have puzzled his physicians. The paralytic condition of the arm persisted up to the time of his death (September, 1891), which took place from "cancer in the side." There was a tendency to improvement, as the arm was rather better during the last years of his life. He had regained a certain amount of use of it, but I am unable to say exactly how much.

CASE III. *Functional paralysis of the arm, following injury to the side.*—This case was first seen by me December 1, 1886. At that time there existed decided but not absolute paralysis of all muscles of the hand and arm, including the deltoid. There was also profound but not absolute anæsthesia over the same arm, extending above to a point half-way between the shoulder and the root of the neck, and behind over the scapular region. The anæsthetic area was separated from the normal skin by an intermediate zone about two inches in width, where the anæsthesia existed in a less degree. There was no degenerative atrophy of the muscles nor contractures or rigidity; the deep reflexes were not exaggerated. The monoplegia in this case dates from the battle of Newberne, March 14, 1862, when he was injured in the following way. I give the account in the patient's own words:

"In the course of the fight one of my men was wounded; being near him, I was about to give him a drink of water, and held out with my left hand a tin dipper, when a round shot struck the dipper, knocked it from my hand, passing up the length of my forearm, and, fortunately for me, had just room enough to pass between my elbow and side. The wind of the shot turned me half-way round, and threw me with great force to the ground. I was unconscious for twenty-four hours, and very much confused for a week after." On recovering consciousness the "numbness and loss of feeling in the arm were the same as at present." The arm and side were bruised, but nothing more. He thinks that when he fell, he struck on "the back of his head" and "middle of the back, either dislocating or otherwise injuring three ribs." Under date of December 2, 1891, he writes: "The spot on the back of the head is as tender and sore to touch to-day as ever;" and he still complains of great "pain and soreness directly through the ribs just below the breast-bone. If he makes a misstep, or coughs, or tries to lift anything, it gives him severe pain and remains the same as ever."

At an examination in 1886 no signs of any injury to the side or head was found; no cicatrices of wounds or anything that would account for the pain complained of. No note of the special senses was made at that time; but December 1, 1890, he writes: "My left eye-sight is as if I were in a fog; the left ear almost totally deaf." December 1, 1891, his disability still persisted unchanged. The monoplegia has therefore existed nearly thirty years.

That the picture presented by these cases resembles that of functional disease there can be no doubt; nor can it be doubted that this diagnosis would be made in cases presenting similar symptoms immediately after an injury. I do not see any reason to question the diagnosis because of the long persistency of the symptoms, and to assume that for this reason there must be an organic lesion present.