

tion of the tracts in adult animals, and obtained the same result. This he attributes to withdrawal of the cerebral influence.

The authors conclude with the following summary of the inferences drawn from their researches :—

1st. There are morbid states which correspond exactly in their clinical features to the disease described by Duchenne under the name of acute and sub-acute spinal paralysis of adults. These morbid states depend, as Duchenne had foreseen, upon lesions of the anterior horns of the cord.

2nd. On the other hand there are groups of symptoms which so closely resemble these as in some cases to be confounded with them, and in which no appreciable lesions of the spinal cord are found.

3rd. It is impossible to affirm definitely that the disorder in these latter cases is dependent upon the co-existing peripheral neuritis.

4th. The clinical phenomena go to prove that the cerebral centres are implicated in the process, and in our opinion there is ground for the belief that they take a part in its production (amyotrophic polyneuritis associated with psychomotor disturbance).

5th. It does not appear to us possible, at present, to determine the relationship between the amyotrophic paralyzes of poliomyelitis and those of multiple neuritis. The hypothesis which commends itself most to our judgment is that of a lesion of the neuro-muscular arc (motor cortical cells, ganglion cell of the cord, motor nerves and muscles) effected by a pathogenic agent which may act with greater or less virulence upon any part of the arc.

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### **Ballet on Hysterical Attacks Simulating Partial Epilepsy** (Gaz. des Hôp., July 16th, 1891).

The writer points out that the initial phase in an attack of hysteria major bears a close resemblance to an epileptic fit, and on this account it is distinguished by Charcot as the "epileptoid" stage. He proposes to shew that hysteria may also imitate the lesser or Jacksonian epilepsy, giving rise at one time to spasms of limited extent, at others to convulsive seizures of the whole of one side of the body. He exhibited a case of the latter kind. The subject was a young girl who had hemianæsthesia of the left side, and who had several times suffered the "grand attack." She was therefore the victim of hysteria major.

To the typical features of the grand attack there had been added in the case of recent seizures certain other manifestations. To elicit these it was only necessary to stroke the patient gently over one of the two hysterogenic areas which she presented. These were respectively under the left breast and on the top of the head. The immediate effect was spasmodic contraction of the sternomastoid of the right side and of the trapezius on the left, the head inclined to the left side and the patient foamed at the mouth. At the same time the left side of the face, or that part of it supplied by the inferior division of the facial nerve was thrown into contractions. This group of symptoms resembled closely, and might be mistaken for a cerebral lesion causing irritation of the motor centre for the face. Such a lesion would be situated at the base of the right ascending frontal and parietal convolutions.

M. Ballet remarks that the possibility of such an attack must be recognised in order to avoid serious mistakes of diagnosis, and he relates an instance in which he himself fell into an error of the kind. The patient had been under his care for some time, suffering from hysterical disorders. On one occasion she was, in his presence, seized with epileptiform convulsions which had their starting point in the leg. For twenty-four hours he continued to believe that the case was one of tubercular meningitis—an impression which was borne out by some of the facts observed. Presently, however, he discovered his mistake, and recognised that he had to do with a hysterical phenomenon. He points out further, to emphasise the readiness with which a false conclusion may be formed, that, at the time of this occurrence, he was already familiar with the hysterical form of partial epilepsy, and had written a monograph on the subject.

The circumstance of all others most misleading in these cases is found in the fact that the hysterical attack may stop short with the epileptiform stage. It may happen, for a time at least, that other phenomena (*grands mouvements*, emotional attitudes, hallucinations) are wanting to assign to the attack its true hysterical character. This is generally due to the fact that the seizures follow one upon another without intermission, and with such rapidity that these constituent phases have not time to develop. The result, to all appearance, is a condition, not indeed of epilepsy, but of epileptiform convulsions.

In the case under discussion the patient had had sixty-two attacks in the space of an hour and a-half. Ordinarily they were separated by a variable interval, but they could readily be brought

on at any time. When one was about to take place, and before the facial spasm set in the pupils were depressed, the eyes converged towards the root of the nose, and the limbs assumed a cataleptic state, retaining whatever posture they were put in. The cataleptic condition persisted throughout the epileptiform stage, and for some time afterwards. Frequently, as might have been expected, facial convulsion was attended with hallucinations. When this order is observed diagnosis becomes comparatively easy. When, on the other hand the seizures are repeated in series, mistakes are readily made. Even under these circumstances, however, there are marks by which the hysterical may be distinguished from the true epileptiform attack. The chief is the absence of any rise of temperature, which (Charcot, Bouchard, Bonneville) invariably accompanies a succession of epileptiform convulsions.

Another point is the immunity of the implicated limbs from subsequent paralysis. Temporary paralysis is often observed as a consequence of Jacksonian epilepsy; it is very rare in connection with the partial epilepsy of hysteria. It would be a mistake, however, to suppose that it never occurred. Again an important inference may be based on an analysis of the urine voided after a fit, since it has been shown by Gilles de la Tourette and Cathelineau that urea is increased after an epileptic, diminished after a hysterical attack. In the latter case also it has been stated that the amount of earthy and of alkaline phosphates respectively tends to become equal. This, however, is not always so.

M. Ballet further remarks that, whereas in the epileptic stage of hysteria major, as in an epileptic fit consciousness is lost, it may be retained in hysterical attacks simulating partial epilepsy, just as it is retained in a fit of Jacksonian epilepsy. In illustration he pointed out that the patient then under examination was apparently alive to all that took place. She habitually asserted that she could follow the conversation around her; while her face underwent contortions she would obey the instructions given to her, such as to bend her arm, or to kneel down. In fact she was in some respects more docile than when in her normal state of health.

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**On the Etiology of Tabes.** By Prof. W. ERB, Berlin, Klin. Woch., July 20th and 27th, 1891.

Professor Erb states that since his last publication on the subject, in 1883, he has been constantly engaged in collecting a