Short Notes and Clinical Cases.

A CLINICAL NOTE ON THE OCCURRENCE OF HYPOTONIA IN DEMENTIA PARALYTICA.

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The following case of general paralysis of the insane is remarkable in that a very striking degree of hypotonia was accompanied by scarcely any other characteristic signs of *tabes dorsalis*.

Clinical History.—Dvr. D., A.S.C., age 31, was admitted to the Neurological Department, B.S.F., on Aug. 14, 1918. He had contracted syphilis eleven years previously, but otherwise had enjoyed good health up to the date of his admission to hospital. He gave a history of having been knocked suddenly on to his back by the butt of a vicious ram one month previously. He complained of 'rheumatic' pains in the soles of his feet, and in his legs and fingers.

Mental Functions.—Perception: he recognizes objects and the movements associated with their use; there is no apraxia. He has auditory hallucinations at night. Memory and orientation normal. Content of thought: he shows a complete lack of insight into his condition, and imagines himself to be in good health; in comparison with others he thinks he is a very strong man and "could beat Jack Johnson". Emotional tone one of exaltation—marked euphoria. He is facile and docile in behaviour; habits clean.

Nervous System.—There is tremor of tongue and outstretched limbs, and coarse tremor of the lower facial muscles, with an accompanying loss of lines of expression. Speech and articulation: paraphasia occasionally; slurring and reduplication of syllables and words. Pupils moderately dilated and unequal in size; reaction to light and on convergence sluggish. Fundi normal. Cranial nerves normal; no nystagmus.

Sensory Functions.—No cutaneous anæsthesia. Pin-prick does not evoke discomfort except on the face, nor does bleeding occur in the analgesic areas. There is diminished sensibility to pressure pain on nerves and muscles of all four limbs. Joint sense normal.

Motor Functions.—Motor power normal; no muscular wasting. Tonus: a very marked degree of hypotonia exists, especially in the muscles of the back and lower limbs. It is possible for the patient

to flex either thigh acutely on the abdomen, at the same time keeping the leg extended. This deficiency of muscular tonus allows the patient to assume the most extraordinary postures without pain (*Figs. 1, 2*). Co-ordination normal; gait normal; no Rombergism. Reflexes:

abdominals brisk and equal; plantars, flexor response; bulbo-cavernosus reflex present; supinator-, biceps-, and triceps-jerks present and equal; knee-jerks exaggerated; ankle-jerks brisk; organic reflexes normal. Skull and vertebral column normal.

Cerebrospinal Fluid.—Clear; pressure increased; marked excess of albumin and globulin content; lymphocytosis. Wassermann reaction positive.

On the morning of Aug. 15 the patient had a 'fainting fit' lasting a few minutes. On Aug. 25 he was transferred to the psychiatric department, and here

the diagnosis of dementia paralytica was confirmed.

Remarks.—

Hypotonia or diminution of muscle tone can be observed in different affections of the nervous system in which there is interruption of the short collateral fibres constituting the

FIGS. 1, 2.—Postures assumed owing to hypotonia in dementia paralytica.

spinal reflex arc, and of those forming the cerebellar arcs (anterior horn collaterals, and fibres arborizing around the cells of Clarke's column). Its occurrence in tabes dorsalis is well known, and is accountable for the abnormal postures into which tabetic limbs can often be placed. Not only are the muscles hypotonic in this disease,

but relaxation of articular ligaments can also be demonstrated, permitting of a wider range of absolute movement than is possible in the normal subject.

The combination of *tabes dorsalis* and *dementia paralytica* is not a very rare occurrence in asylum practice, and in the post-mortem room tabetiform lesions of the spinal cord can be found in about 50 per cent of patients dying from general paralysis. Nevertheless, the fully-developed symptomatology of locomotor ataxia is by no means common in general paretics, and, in the writer's experience, a marked degree of hypotonia is seldom seen.

In this case, the absence of Rombergism, ataxia, and sphincter trouble, and the preservation of the tendon reflexes, left but few data for establishing the presence of *tabes dorsalis*, although it must be noted that both cutaneous and deep analgesia—two of the most important diagnostic signs—were found over a very large area of the body. On the other hand, the patient's mental state and general appearance were quite characteristic of *dementia paralytica*. It must not be forgotten, however, that the mental and neurological signs of an apparently 'typical general paralysis' may be closely simulated by a syphilitic affection of the enclosing and vascular structures of the nervous system. This is especially the case where the progress of the malady is rapid, and the vigorous application of antisiphilitic remedies may, in such cases, rapidly transform the clinical picture and even bring about an apparent recovery. It is to be regretted that no opportunity was afforded for observing the effects of salvarsan treatment on this patient.

Inquiries were made with a view to determining whether the patient, in infancy or in youth, had received training which permitted the adoption of the remarkable postures seen in the illustrations. It was ascertained that before the war he had been an able seaman, and no evidence was forthcoming that he had ever been a professionally trained contortionist.

The occurrence in this case of a marked degree of hypotonia along with normal postural sense and co-ordination would appear to indicate that the syphilitic virus exercised its effects in a most remarkably selective manner on the afferent system of spinal neurones, and it further shows that a profound hypotonia may be quite compatible with complete integrity of reflex and co-ordinated voluntary action.