A CASE OF THOMSEN'S DISEASE.

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H. F. B., aged 19 years, a joiner, complained of difficulty of walking and of ascending stairs, experienced entirely at the commencement. He lived and was brought up in a healthy part of Devonshire till the last two years, when he came to Cardiff. His father, aged 50, suffered in the same way from childhood; for some years the condition gradually advanced, but for the last ten years he has improved to an appreciable extent. His mother has always been perfectly free. The patient has one brother, aged 23, who is not affected, and two sisters, aged respectively 21 and 16, the elder of whom is slightly affected, chiefly in the legs, which is specially noticeable on going upstairs. His paternal and maternal grandparents are unaffected. His father has also two brothers and three sisters who are unaffected, as are their families. A distant relative on the father's side—probably a second cousin—is also affected, being almost as bad as the patient.

The patient never remembers being without the affection, and it was early noticed by his mother. He has always been a tee-totaller and never uses tobacco. He is of a very healthy appearance, and never had a day's illness in his life other than the present affection. He was unable to take part in the usual boys' games, from being unable to start at once, for example, to run or kick. The patient is well developed and muscular, especially in the lower extremities, and presents nearly all the usually described features of the disease.

He can rise immediately from a sitting position, but is unable to start walking at once, and stands helpless, though evidently making a strong voluntary effort. When once started he can, after a few steps, get along with moderate ease, but experiences a similar difficulty in attempting to break into a run or step high. The muscles, when once contracted, remain for from five to ten seconds in a state of spasm, resisting all efforts to overcome it. The same is seen in the other voluntary movements of the body, especially the arms and neck, but the eyes are unaffected. He is unable to shake hands; he can grip, but he is unable to loose it, and cannot do the shake.

The muscles of the mouth are also affected, interfering with his speech, the mouth not being properly opened. The father is affected in much the same manner, but in his case the eyes are now and have been to a greater extent affected. The various systems are all normal; axillary temperature 98.8°. He perspires profusely, and appears heated after what to other people would appear but moderate exertion. He is 5 feet 7 inches in height, weighs 11 stone, chest measurement 36 inches. The condition is decidedly worse now than when he first noticed it, and patient thinks it is still progressing.

This is evidently a case of Thomsen's disease. In this case the hereditary nature of the disease is well brought out, and also the fact that it is often congenital. In Finlayson's *Clinical Manual* and elsewhere it is mentioned as a leading feature of the disease that there is great difficulty in rising from the sitting posture; here this is totally absent, the patient being able to rise immediately; but now comes in his great difficulty of starting to walk, which he is unable to do for some seconds—about 10. A primary movement is readily performed, but the difficulty is caused by the tonic contraction thus produced; thus he can readily flex the forearm, but after this primary movement the contraction continues, and extension cannot be performed till it passes off. The natural cure, which occurs to a certain degree as time goes on, is seen in the father's case, who began to improve about middle life.

Bristowe says: "The characteristic feature of the disease is a brief check to the use of the voluntary muscles coming on at the moment when it is first attempted to put them into action after rest." That the affection comes on after an interval of rest is so in this case; but it is not a check to the initial movement that occurs, but to any immediately succeeding movement. In this as in other cases recorded the patient was worse when nervous, when attention was directed to his infirmity, or when fatigued.

Pathology.—This seems to be entirely a functional derangement; volition is perfect; there are then left three factors: the motor cells, the connecting nerves, or the muscle cells; the probability is

the nerves are unaffected. In some of the cases examined the muscles have been healthy, in a few the muscle fibres have been enlarged and the nuclei more numerous. It may be supposed that, after a period of rest during which the motor cells have acquired their maximum force, the voluntary impulse causes an excessive discharge of motor energy, which of itself sets up a second and succeeding discharges in the same cells, and thus the muscle is again stimulated to contraction before it has had time to relax from the first contraction, and that, after the cells have been thus relieved of their excess of energy, they become more stable, and are able to work smoothly. Or a similar theory might be applied to the muscle cells.

Treatment.—Nerve stimulants and nerve sedatives, as well as electricity to the muscles, have been tried, but in this as in all other recorded cases, treatment has been futile.

OPHTHALMOLOGICAL MEMORANDA.

TWO NEW TESTS FOR COLOUR BLINDNESS.

THE Lantern Test is the one which I recommend for the testing of sailors and railway employes. With it we can exclude dangerous persons, and dangerous persons only, allowing the slighter degrees of colour blindness to pass, as for all practical purposes they are normal sighted.

The apparatus of the test consists of a lantern and twelve slides; six slides contain coloured glasses (standard red, yellow, pure green, standard green, blue, and purple), and six contain modifying glasses (ground, ribbed, and four thicknesses of a special kind of neutral glass). I notice that since my paper on "The Tests for Colour Blindness" was read, several tests, in which neutral glass forms an element, have been proposed. To prevent disappointment

The set of figures comprised in I represents the Lantern Test for colour blindness; II the Classification Test.

I will state that the neutral glasses used in this test are not ordinary pieces of smoked glass. They were selected first by spectroscopic examination in accordance with my theory of psycho-