

himself along. About two years ago he first noticed that he was very apt to fall, and on attempting to rise from the horizontal position he found it necessary to use his hand to drag himself up. He never suffered from any serious illness. He attributes his present trouble to a fall which he received three and one half years ago. On careful enquiry, however, he acknowledges that for a long time previous to this accident, he disliked ascending a stair, because he found it both difficult and tiresome. Two and one half years ago he received a second injury; on this occasion a weight fell on his head, rendering him insensible for half an hour, and giddy and stupid for several days. His parents are dead, but cause of death is unknown. He has a brother living and in good health. Had no sisters. As far as he knows there has been no similar trouble to his in any of his relations.

Present Condition.—You will notice the peculiar gait which he assumes when he walks across the floor: 1st, he walks with his feet far apart; 2nd, he walks on the front part of his feet, the heels being raised from the floor, and 3rd, the gait is of a more or less waddling character. Nothing abnormal can be found in connection with the circulatory, respiratory, digestive or genito-urinary systems. There are no symptoms of any affection of the brain or cranial nerves.

On stripping the patient the marked difference in the size of certain muscular groups is at once noticeable. In the upper extremities, the contrast between the well developed muscles of the fore-arms and the atrophied ones of the upper arms is very striking. The circumference of the thickest part of the upper arms is an inch less than the fore arms. A still greater disproportion exists between the muscles of the thighs and those of the legs, the circumference of either calf being an inch greater than the circumference of either thigh at the thickest part. The following muscles of the upper part of the body are in a state of more or less complete atrophy: The pectoralis major and minor, of each side, are considerably atrophied, especially the costo-sternal portion of the former. The lower half of each trapezius has almost entirely disappeared. There is scarcely a trace left of the rhomboids. The latissimus dorsi of each side is very much atrophied, as is also the whole group of the spinal extensors. The biceps of each

arm is greatly wasted, and what there is left of it is in a state of active contraction, preventing the full extension of the arms. The brachialis anticus of each arm is also in a state of advanced atrophy; the triceps is only slightly affected. The coraco-brachialis, the supra and infra spinati, as well as the deltoids, are normal. None of the muscular groups in the fore-arms or hands have suffered.

In the lower extremities the following muscular groups are in a state of more or less complete atrophy: The glutei of both sides, and the ilio-psoas. The quadriceps of each thigh is more extensively atrophied than any other group in the lower extremities. The peronei of the right side are considerably atrophied, while those of the left side have escaped. The calf muscles are hypertrophied. When the patient is in the erect posture there is marked lordosis. All the atrophied muscles are firm. They are not the seat of any fibrillary twitchings. The patient is quite unable to raise himself from the horizontal to the erect position, even with the aid of his hands. He, however, can accomplish this by getting a support to his chin, and thus using the muscles of the neck to drag his body upwards. The patellar reflex is absent. The plantar reflex is exaggerated. While the cremaster and abdominal are normal on the right side and absent on the left. The epigastric reflex is present, but the scapular is absent. The atrophied muscles do not respond to the faradic current. They are *not*, however, the seat of the degeneration reaction. Sensibility is normal. There is no interference in the vesical or rectal reflexes.

You will at once notice the striking difference there is in the patient before you, and the one* whose case we enquired into last week, and whom most of you have seen. When comparing these two cases, it is at once observable that we have to do with dissimilar clinical pictures, although they are both frequently described as one and the same disease. The following are the marked points of difference between them: 1st, they differ as to the localization of the atrophy. In the patient affected with the spinal variety of the disease, the atrophy commenced in the small muscles of the hand, in

* The patient referred to is a man, aged 37, who has the ordinary spinal variety of progressive muscular atrophy. The wasting commenced three years ago in the small muscles of the left hand.