TABES DORSALIS—ATAXIA LARYNGIS.

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It is well known that affections of the larynx are occasionally found in the course of tabes dorsalis. Two of them, spasm of the adductors of the vocal cords, and bilateral abductor paralysis, have received considerable attention and are now included among the well-recognised, but somewhat rare, symptoms of the disease.

Not so, however, ataxia of the vocal cords, which, probably on account of its extreme rarity, has received but very scant notice. Indeed, the only reference to the condition I have been able to find in English or French literature is in Gowers' 'Diseases of the Nervous System,' vol. i., where it is said that "a sort of ataxic irregularity of the vocal cords has been described by Uhtoff."

I have ventured therefore, to put the following case on record, although it presents few other features of any interest:—

¹ C. A., æt. 35, coachman, came to Moorfields, September 15th, 1886, complaining of squint and diplopia. His mother is alive, æt. 70, but his father died at 60 from "drink." There is no history of any hereditary neurosis. He is married and has eight children, three of whom have died from consumption, bronchitis, and meningitis respectively. He admits gonorrhoea, but denies syphilis, of which I carefully enquired, but could find no evidence.

Twelve months ago the right eyelid drooped, the eye itself turned outwards and he suffered from giddiness and diplopia. Four months later numbness of the four fingers of the right hand came on, and he had what he called rheumatic pains down the shin, but they seem to have been of an aching character and not at all like lightning pains.

At present the right eye cannot be moved past the middle line inwards, and the upper and lower movements are limited. No nystagmus. Little ptosis now remains, but the lid is raised with a double jerk, as if two efforts were required to accomplish it. The pupils measure 3.5 mm., are equal and contract to accommodation, but not to light. Neither is round, but more or less

¹ The patient was under the care of Mr. Hulke, to whose kindness I am indebted for permission to publish the case.

triangular, of course with the angles well rounded off. The near point is at seventeen inches in both eyes, indicating a considerable weakness of accommodation in a man of his age. Distant vision normal. No hypermetropia or colour blindness. Fundus normal.

Knee-jerks absent; micturition normal. Not the slightest unsteadiness with the eyes shut and feet together. No abnormality of sensation anywhere, except in the four fingers of the right hand, which are still numb. With that hand he utterly fails to perform any highly co-ordinated act, *e.g.* the buttoning of his coat. He also makes a very bad shot at his nose, when he endeavours, with eyes closed, to touch it with his forefinger. There is no such difficulty with the left hand, nor are those fingers numb. The aching pains in the legs continue. No girdle pain. Special senses normal. No bulbar symptoms. Soft palate normal. No tremor of tongue. There is occasional vomiting, but nothing at all suggestive of gastric crises. His tongue is foul, and he suffers, and has done for the last few months, from the belching of enormous quantities of wind. It happens perhaps once or twice every minute, and is evidently quite distressing. The only other patient I have ever met at all approaching him in this respect was himself a tabetic.

Twelve years ago it was noticed that C. A. had two voices, a high and a low, but what this meant I could not quite make out, nor could he explain. Twelve months ago it underwent a change and became as at present, though not so marked. It very much resembles the cracked voice of puberty. There is a rapid change occurring every three or four words from his natural, rather deep-toned voice to a high falsetto key. This peculiarity in the voice drew my attention to the larynx, where I found the following condition of affairs. There was a total loss of all rhythm and regularity in the action of the cords. They were capable of being completely adducted during phonation, and abducted during inspiration, but the latter by starts and jumps only. Sometimes they would separate for two or three mm., hesitate and then actually come together again, before being suddenly fully abducted. They always acted in unison, but the left cord seemed the more affected. Dr. Semon, who kindly saw the case with me afterwards, corroborated the above description, except that he did not see the cords come quite together after once they had commenced to be abducted. It is impossible to say whether this ataxic irregularity of the cords was influenced by the volitional element of respiration, or not, but my impression is that it was most marked during his earliest examinations, when he had to make greater efforts to breathe as directed, than were required afterwards.

There was no history of laryngeal crises. Thoracic respiration was carried on with perfect rhythm and regularity. Pulse 80, small, rather irregular, as if a beat were occasionally dropped. Sounds normal. Six months later his condition remained unchanged, except that his pains had disappeared and his voice was becoming more "cracked." The treatment consisted of Pot. Iod. gr. x. ter die.

The evidence in favour of the disease being primarily tabes dorsalis is not great, but I take it that the absence of knee-jerks (which was frequently tested), the presence of the Argyll-Robertson pupils, the partial paralysis of the third nerve and the numbness and inco-ordination of the fingers, are sufficient, in the absence of symptoms of general paralysis, to establish the diagnosis.

The peculiar falsetto voice may, of course, be only a coincidence and have nothing to do with the rest of the case, but I am inclined to consider it a part of the ataxia of the vocal cords, and due to a similar condition of some fibres of the phonatory muscles. If it came on, as he asserted, twelve months ago, it would correspond roughly with the commencement of the development of the disease, as shown by the third nerve paralysis and the numbness of the fingers. The condition too is evidently progressive, as he himself has noticed. Oppenheim¹ describes a case of tabes, in which there was a falsetto voice, but in this instance there were also laryngeal crises and paralysis of the posterior crico-arytænoids and right lateral crico-arytænoid muscles, as well as difficulty in swallowing and temporary failure of the heart. If we except the slight irregularity of the heart, there is nothing in my own case to point to any further affection of the 8th nerve nuclei, than that, which is probably the cause of the ataxia of the cords.

I have notes of two other cases of tabes with an irregularity of the pupils similar to that described above, so that that condition cannot be a very rare one.

¹ 'Berlin. klin. Woch.,' Jan. 26, 1885.