

in multiple sclerosis without the slightest trace of sensory disturbance, the latter can not be regarded as necessary for the manifestation of ataxia.

The writer also calls attention to the fact that the abdominal reflex is often absent in multiple sclerosis. SPILLER

INFANTILE AND HEREDITARY MULTIPLE SCLEROSIS. By Prof. H. Eichhorst (*Virchow's Archiv*, 146-2, 1896, p. 173).

Although Marie, Unger, Moncorvo and Nolda have reported cases of multiple sclerosis occurring in children, there has not been as yet a single autopsy confirmative of the opinion of these writers.

One of the cases reported by Eichhorst in this paper is the first which offers a foundation for their statements, and both are interesting in another way, inasmuch as they prove unquestionably (Eichhorst) the possibility of hereditary transmission of the disease.

A woman, who had multiple sclerosis, gave birth to a child who developed symptoms of the same disease. The first distinct manifestations of the malady were noticed in the boy at the age of eight, but his father stated that he had never been normal, and had had a tremor for a long time, which was increased by voluntary movement. Death occurred when the child was nine years old. Three other children in the family were healthy.

Autopsies were obtained in both cases, and disseminated sclerotic areas were observed, which did not extend beyond the spinal cord, and yet cerebral symptoms of a severe type had been observed in both mother and son. According to Eichhorst, the clinical manifestations frequently do not agree with the post-mortem findings in disseminated sclerosis. The symptom-complex seen in this disease may be the result of a functional condition. In both cases the sclerotic foci were very small. SPILLER.

#### PATHOLOGICAL CHANGES IN AMYOTROPHIC LATERAL SCLEROSIS.

In a report of two cases of amyotrophic lateral sclerosis in the *American Journal of the Medical Sciences* for June, 1896. Dr. Joseph Collins makes an interesting contribution to the pathology of the disease. In his first case the pathological findings are summarized as follows:

"In cervical portion of cord in fresh state, from third to sixth segments reddish, softened appearance in the area of anterior horns. Almost complete degeneration of crossed pyramidal tracts, from the medulla to the end of the cord. Degeneration in the uncrossed pyramidal tracts, but not so extensive or complete. Evidence of degenerated blood vessels and excessive vascularization throughout the cord, especially in the cervical and dorsal regions and most evident in the grey matter. Massive atrophy in the ganglionic cells of the anterior horns throughout the cord, remarkably so in the cervical region, where they are almost entirely absent, and the few that are to be seen in a section are in a high state of degeneration. Increase of the spider cells, particularly in the cervical region. Best preservation of cells of any individual column are the cells of the groups of the lateral horns. Central canal filled up and distended with a proliferation of the ependyma. Capillary hemorrhages in the cervical grey matter, associated with rarefaction of the ground-substance of the anterior horns, and a condition of necrobiosis. Striking degeneration of the twelfth nerve nucleus throughout its entire extent, except at its very termination ventrad. Slight degeneration in the common accessorio-vago-glossopharyngeal nucleus of the tenth nerve. Nucleus of the seventh nerve apparently normal. No changes in the motorial pathway above the pons, and cortical cells of the motorial areas entirely normal. Atrophy of the trunks of the twelfth, the ulnar, etc., and degeneration to be seen microscopically. Usual changes in the muscle fibres"