

The sensory signs are akin to those of tabes, so that subjective pains and anæsthesias may occur, although the pain complained of is mainly rhachialgic. Anæsthesia of limbs and of trunk, of tabetic type, may be present. Ataxia is the main sensory sign and is more pronounced in the legs than in the arms; and, in the former, is shown more on turning or in the dark. Naturally, rhombergism is present. The pupil reactions are usually sluggish or lost. The speech is frequently ataxic or slightly altered.

Such may be considered as the tabetic spastic paraplegia, and a comparison with the next class, or the ataxic division, is simply a grade of the same disease with less pronounced sensory signs. Tabetic pains and anæsthesias are absent, while the ataxia and spastic paralysis remain, as the main signs of involvement of both posterior and lateral columns.

Between these classes and a simple spastic paraplegia, in which the ataxia is hardly evidenced, or the posterior column only proved post-mortem to be affected, several varieties may occur, and types may be found in which some wasting of muscles show the anterior horn cells to be involved.

Pathologically the symptom complex, ataxic spastic paraplegia, calls for degeneration in the posterior columns and direct pyramidal tracts, while other tracts may be affected or not. Occasionally a peripheral zone of sclerosis occurs. The posterior column degeneration, according to Gowers, is dissimilar to tabes in the more marked involvement of the dorsal rather than the lumbo-sacral region, and in the more frequent escape of the root zone. The lateral column degeneration is frequently rather more diffuse in its gliosis than systematized, since it includes the zones internal to the usually outlined pyramidal tract, besides the diffuse areas found in more typical motor neuron degeneration. The connective tissue of the cord may be generally increased. This class must also perhaps be considered rather a clinical than a pathological entity, since the great number of cases described pathologically appears to be very large of late years. Many of the cases formerly diagnosed under this class have proved to be examples either of disseminated sclerosis or of the toxic group of these ataxic paraplegias. Dr. Crouzon, of Paris, in 1904, has given a very exact account of these various disease complexes.

(3) The third group of the ataxic paraplegias, that occurring in general paresis, requires but little notice here. The relation between tabes and general paresis is such a common subject of discussion, and the occurrence of tabetic signs, both clinically and pathologically, so well known, that it is only necessary to refer to them. Likewise, the occurrence of signs of lateral sclerosis is well known. In general paresis signs of ataxic paraplegia may also be concurrent, and they may vary in intensity in all prob-