## HOWLAND: THE COMBINED SCLEROSES.

In the first place, the term must be used on a pathological basis only, as its present use as a clinical definition leads to great confusion. Clinically, "combined sclerosis" is used, to define chronic diseases in which both motor and sensory signs are present, and, therefore, includes, under such a method of usage, a vast number of diseases, which are pathologically entirely different, being either neuronic, glionic, or vascular in origin, and including both local and diffuse degenerative diseases.

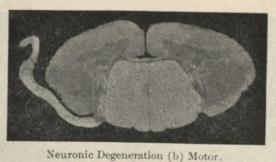
Pathologically, the term demands three distinct qualifications :----

(1) The disease must be primarily neuronic, for degenerations occurring in both motor and sensory tracts, if of secondary origin, are not called combined scleroses.

(2) The degeneration must lie to some extent in two or more tracts of different conducting direction.

(3) The degeneration in these tracts must be of the neuronic type, that is, the nerve fibres should show to some extent continuous degeneration of the axones towards their terminals.

Two difficulties in such a classification must be noted, as particularly the latter of these must widen this definition :---



II.

A case of Amyotraphic Lateral Sclerosis, showing the degeneration in the crossed pyramidal tract with some diffuse degeneration in the adjoining part of lateral column.

(1) That the tracts of the cord, and especially the crossed pyramidal, are not definitely limited, but fibres belonging to them run in a comparatively wide area of the lateral columns.

(2) That while the degeneration mainly lies in the recognized tracts in these combined scleroses, yet particularly in the toxic cases, the degeneration tends to show in places the characters of a more diffuse combined degeneration, and a relationship to the blood vessels is frequently an associated condition, and apparently to some degree defines the course of the sclerosis.