

It is interesting to note the correlation of anatomical parts involved and functional use. Those parts are paralysed which are concerned in articulate speech.

The laryngeal muscles are supplied by the spinal-accessory through the accessory portion, whose nucleus is the lowest group in the medulla.

The palate is supplied by the same nerve, but by fibres that that arise from its highest cells (formerly from facial via sphenopalatine).

The hypoglossal nucleus lies parallel to that of the inner part of the spinal accessory.

The chief nucleus of the facial nerve is only a little above the upper extremity of the hypoglossal. The nuclei of the nerves controlling articulate speech, therefore, are almost in contact with one another.

A simple experiment illustrates the close connection between the fibres or cells which have to do with the muscles about the mouth, and with those for the tongue. Try to narrow the tongue, you cannot do so without at the same time narrowing the opening of the mouth.

The paralysis corresponds to function in its distribution and is gradual in development—two features which evidence the degenerative nature on which the paralysis depends.

There are two forms of chronic bulbar paralysis—the one dependent on the degeneration of the cells of the nuclei in the bulb and associated with conspicuous wasting of the parts paralysed; the other dependent on a slow degeneration of the fibres which conduct the voluntary impulse from the brain to the cells of the bulbar nuclei, and here we have no wasting, but an excess of the muscle reflex action.

But in either form of bulbar paralysis the degree of correspondence with function varies.

The nuclei affected are those of the lower cranial nerves, thence the name "inferior nuclear paralysis." Above this group is another in the bulb, the nuclei of which innervate the eye muscles and are sometimes similarly affected, called "superior nuclear paralysis." In rare cases both sets of nuclei suffer. Gowers cites a case of this kind following diphtheria, and another in which deglutition was affected. Dr. J. Taylor re-