

hypertrophy with pharyngitis; 4. Melancholia, chorea, and reflex epilepsy, which, though cerebral and grave in character, are not infrequently the sequence of nasal obstruction and disease which might in itself be considered of little import. To account for this intimate connection between affections of the mucous membrane of the nose and cerebral affections, Dr. Jacobi, in a recent communication to the New York Obstetrical Society, drew attention to the following three points:—

“In the first place, the trigeminus with all its branches is subjected to direct or reflex irritation, arising from the inflamed condition of the nasal mucous membrane.

“*Secondly*, The thickening of the mucous membrane in the narrow nasal passages of the child (and the same thing is more or less the case in the adult), and especially the presence of a polypus, seriously interfere with respiration, and the result is the accumulation of carbonic acid gas in the brain, particularly about the respiratory centre at the medulla oblongata.

“*Thirdly*, The lymphatic system of the nasal mucous membrane, and that of the dura mater, and the arachnoid membranes are in intimate relations with each other, which is so close that they can be injected from either side.”

Upon such hypothesis it is not difficult to account for certain cerebral disorders as above mentioned, and clinical experience sustains the conclusion.

Lastly, impairment of voice, laryngeal cough, bronchial asthma, and spasmodic croup—a class of morbid conditions whose nasal origin has long and often passed unobserved and, therefore, uncured, and the literature upon which has been meagre and recent. Upon these, therefore, we will add a few facts.

In not a few cases asthma is undoubtedly the result of nasal polypi, and more rarely of hypertrophy of the pituitary membrane.

Fränkel assigns the credit of the first observations on this point to Voltolini in 1871. Since then and within the last four years many cases of reflex asthma have been published by Porter, Daly, Rumbold, Spencer, and Todd and others.

My own clinical experience corroborates and sustains their views. Indeed, the relief and cure of asthma by correcting nasal stenosis is

now so common that we can only wonder that the Profession should have groped so long in the dark, and failed even to seek in the upper air passages a possible cause for this distressing and ever-recurring disease which they found too often baffled their best therapeutic endeavours.

Flint defines asthma as an obstruction of the smaller bronchial tubes, from tonic spasm of the muscular fibres forming a part of the anatomical constitution of the tubes; and Bert and Traube add, from irritation of the pneumogastric nerve.

Now, this irritation may be of one of the peripheral branches, or reflected from other and possibly remote nerves, or might be by reflected impression through the fifth nerve.

The pneumogastric, though in its origin a sensory nerve, receives motor filaments from the *seventh*, from the spinal accessory hypoglossal, and from the first and second cervical nerves. And as the contiguity of origin of the cranial nerves is now demonstrated, we may believe that impressions are conveyed from the origin of the fifth directly to the origin of any of these, and thence a continuous motor tract to the pneumogastric.

Many cases might be cited illustrating the connection as apparent cause and effect, and demonstrating this by curing the effect through removal of the cause. I will cite one most typical.

1. Mr. S., age 27, consulted me for the first time in January 1883, with asthmatic breathing and complete stenosis of nares by the accumulated polypi. He had suffered thus for over two years, the paroxysms always greatest at night, when sleep could only be obtained in the semi-erect position. On a previous occasion he had the polypi removed, but never completely and never accompanied by relief, and soon they returned. Upon examination a few chest rales, but no emphysema, was all that was discovered. Larynx somewhat hyperæmic, and nares completely impacted with polypi. I encouraged him with the declaration that by thorough removal of the obstructing tumours and establishing a healthy condition of the nasal membranes his asthma would be much improved if not cured, he at once submitted to the *snare*—I mean Jarvis'—and after several sittings I