

sufferers for years; but from the histories I have so far been able to obtain, I believe many cases occur from neglected colds, particularly when associated with deviated septum. In these cases mild hypertrophy is the result, producing stenosis and accumulation of mucus, which by its constant presence produces a certain amount of pressure upon the posterior ends of the middle and inferior turbinateds. This compression at any one time may be small; yet we must remember that these subacute attacks of rhinitis often last for many weeks; and that one cold follows another for a long time before the parts affected are submitted to thorough examination and the result ascertained.

One reason why I believe that many cases arise in this way, is the fact that in so many instances the atrophic condition is most marked in the deeper portions of the nasal cavities; that is over the posterior ends of the turbinateds; while in front we have still existing the septal deviation.

The period when atrophic rhinitis usually comes under observation is that of early adult life, say between 15 and 30 years. 44 out of Wingrave's 60 cases occurred during that period. He also gives a remarkable disproportion in the sexes, 49 females to 11 males. In my own case book I find a record of 17 cases, 9 of whom were females, to 8 males.

The symptoms of this disease are very characteristic and too well-known to require a close delineation. They consist of dryness of nose and throat, more particularly the throat; and this quite frequently when the patient can breathe without difficulty through the nose. The shrinkage of the tissues makes the cavities wider, permitting the accumulation of mucus, and nasal breathing at the same time. The normal serous discharge, designed by nature for the saturation of the air of respiration, becomes limited, and finally disappears, leaving the air dry and foul by the time it reaches the throat. With the diminution of serous fluid, there is increase of mucus, which, mixing with the increased exfoliation of epithelial cells, clogs up the nasal passages, finally encrusting the parts. The widened cavity in its turn makes forcible expulsion of the deposits by the breath impossible; and the consequent retention produces the characteristic fetor. The intensity of this fetor varies according to the

severity of the disease and the length of time it has existed. In long standing cases, anosmia is of frequent occurrence; while in a large number the sense of taste is likewise impaired. As before mentioned the faucial and pharyngeal tonsils usually become atrophied, the contiguous sinuses and antra may be involved, and even the eustachian tubes may become victims to the disease.

In speaking of the origin of the peculiar fetor, Wingrave offers a new theory. He tells us that as the normal mucus membrane is a transformed epidermal structure, having with its glands a common origin with the skin, so in atrophic rhinitis, we have a structural reversion in the stratification of the surface epithelium to the primitive type; and in the glands we have established a perverted function. The mucus membrane is converted into cutaneous structure with a corresponding change in secretion. Following out his argument, he speaks of the various odors produced by different portions of the skin, such as the feet, the axilla, the prepuce, etc.; and granting the cutaneous change produced by atrophic disease, we have an odor established within the nasal cavity—having a kinship with all the others.

*Diagnosis.*—Except in its earliest stages, it can rarely be mistaken for any other disease. A careful and thorough examination should always definitely place it *per se*.

*Prognosis.*—Most writers agree that at the best the prognosis in atrophic rhinitis is a very doubtful quantity. Excluding, of course, malignant and specific diseases, it is more hopeless than any other affection of the nasal organs—that is, so far as complete and permanent recovery are concerned. Frankel, of Berlin, says:—"A cured ozena is unknown to me." Bosworth says:—"In the advanced stages, characterized by fetor, and in which the turbinated bones have almost entirely disappeared, I have not seen a case cured." Sajous says:—"Atrophic rhinitis is perhaps the most unsatisfactory of the nasal affections to treat successfully."

All agree, however, that much can be done to ameliorate the symptoms and make life comfortable; and I believe when taken early, and the treatment carried out persistently and faithfully, a cure in some cases can be accomplished; while in the more severe cases, freedom from crusts can be insured, fetor can be kept under control, and