THE PATHOLOGY OF ATROPHIC RHINITIS WITH OZENA.*

BY D. BRADEN KYLE, M. D., PHILADELPHIA.

Much confusion exists in the nomenclature of these two conditions, largely due to the fact that different individuals apply the term "atrophic" to entirely different processes. One thing certain is that there are forms of atrophy peculiar to the nasal mucous membrane, and some of these conditions are associated with ozena. Why do we not have this condition of atrophy in other mucous membranes? This certainly does not exist, and it forces us to the conclusion that either the mucous membrane itself or its function predisposes this membrane to an atrophic change, or changes

Personally, I believe there is no one cause of atrophic rhinitis, but that there are many conditions, both external and internal, that lead to pathological changes in the nasal mucous membrane, which bring about the condition known as atrophy. Seen at different stages, it will be described as a different variety; yet, the ozena which is associated with some cases and not with others, may have its origin in the altered secretion, in the secretion, even, of the glands of the mucous membrane, or may come from an involvement of an accessory cavity. This accessory cavity involvement may be primary, or it may be secondary.

Very few observers have had the opportunity of studying a case from its beginning. It is always developed before the physician sees it. Personally, I have seen many cases of atrophic rhinitis with ozena, in which there was no involvement of the sinus, but in other cases I have observed the ozena was without any atrophy, in which there was involvement of the sinus; so that it brings us to this conclusion: That we may have atrophic change with ozena; we may have atrophic change without ozena; we may have ozena and atrophic change in which there is associated a lesion of the sinus, either primary or secondary. We may also have associated lesions of the sinus with ozena, in which there is no atrophic change in the nasal mucous membrane, and while the process when completed may be the same, yet the causes are different, and no one definite etiological factor can be assigned.

On examination of tissue taken from atrophic cases, in some instances the tissue itself, even after removal, still had the odor so

*Part of a Symposium read before the Section on Laryngology and Rhinology of the New York Academy of Medicine, February 26, 1908.

peculiar to ozena. This would seem to point to some chemical change in the gland structure. The odor of atrophic rhinitis varies, and I think is due to different causes in different cases. Various bacteria have been found, but the same bacteria can be found in decomposed secretions elsewhere.

The mucous membrane of the accessory cavities secretes very little mucous, and if these cavities are inflamed, then the secretion is not mucous but inflammatory product. The mucous secreted from the nasal mucous membrane under normal physiological conditions does not tend to form crusts and adhere to the mucous membrane. In atrophic rhinitis, with or without ozena, this, however, is the case, showing an altered mucous membrane and altered gland structures, with necessarily altered secretion. That this secretion is altered is proven when an attempt is made to thoroughly cleanse the mucous membrane. This we all know in an atrophic case is practically impossible to do.

Atrophic rhinitis usually begins in childhood, it is very true, and it is possible that the blood supply is sufficient up to a certain period of development, and then, owing to faulty formation, as some of the blood supply comes through bony foramina, these may not develop sufficiently large to allow sufficient nutrition to be carried to the part; hence, the atrophic change.

The general condition plays a great part as an etiological factor. So does heredity. I think, however, that we can sum up the whole condition as follows: That there is not any one etiological factor as a cause of atrophy of the nasal mucous membrane. Second, that the source of the odor in the condition known as ozena has no one origin. Third, that there may or may not be associated sinus lesion, either primary or secondary, to the atrophy or ozena; that we do have an atrophic condition which follows a simple chronic inflammation with contraction, that we do have an atrophic condition due to faulty nutrition from other causes; that we do have an atrophic rhinitis which is truly atrophic change. We may also have an atrophic rhinitis similar to that condition seen in the liver, which is known as red atrophy, in which the membrane, although puffy and cyanotic, is strictly atrophic as to function and cellular structure brought about by venous stasis. No specific bacteria will account for all cases of atrophy of the mucous membrane or all cases of ozena.