

active cavernous dilation with the specific atrophic changes, and I cannot believe that atrophic rhinitis is the result of a badly treated catarrh.

Of course there are other varieties of hypertrophic rhinitis, such as the mucoid, glandular, etc. But what is the usual termination of these conditions? The erectile form, if slight, usually subsides, but if severe and persistent, owing to actual atrophic mucoid degeneration of the muscular walls of the spaces, it develops into what I have described as turbinal varix,* and is eventually removed under the varying disguise of polypus or angio-myoma. Should it be chiefly mucoid its localized exaggeration becomes an ordinary mucoid polypus; if glandular, it becomes cystic. But I cannot understand how any ingenuity can trace any of these conditions, step by step, into the conditions which constitute atrophic rhinitis.

If this distension and subsequent sclerotic obliteration of the venous spaces is the *fons et origo* of the disease, how can the presence of atrophic rhinitis be accounted for in situations where no erectile tissue is even found? The disease is not confined to the turbinal bodies, but spreads to every adjacent structure excepting the skin.

Drake and others† have advanced the view that it arises as a chronic purulent inflammation of the accessory sinuses, whilst Gottstein holds that deficient development of the turbinal bodies is responsible, since it is followed by abnormal patency of the cavities.

Whilst admitting that a simply *dry* or pseudo-atrophic rhinitis may follow a catarrhal state, it must not be confused with this particular disease, and whether atrophic rhinitis is a specific disease *ab initio*, or is the result of a series of hypertrophic events, I leave for your discussion.

There can be but little doubt that constitutional influences are often important factors, although Bosworth denies any connection between this disease and tubercle or scrofula.

In thirty-seven cases I obtained a definite family history of phthisis; one was attributed to small-pox, one to erysipelas, five were associated with acquired and inherited syphilis, whilst a large

number gave a family history of suppurating glands in the neck, and personal history of persistent anæmia.

Alcoholism has been credited with a causal relation; this I cannot verify.

Whether there is or is not a special diathesis, apart from tubercle or struma, I will not venture to advance.

I will now proceed to a clinical analysis of my sixty cases.

1. *Age of the patient when first seen.*

From ages 14 to 20 years.....	21
" " 20 " 30 "	23
" " 30 " 40 "	8
" " 40 " 50 "	5
" " 50 " 60 "	3

It will be seen that the majority of cases presented themselves between puberty and thirty, but these figures are, however, of much less importance than the following, which show, as far as I was able to gather with the most careful questioning, the *age at which the disease was first noticed* i.e.

2. *The date of commencement.*

From 1 to 5 years.....	2
" 7 " 9 "	4
" 12 " 15 "	28
" 15 " 30 "	19
" 30 " 53 "	7

These figures indicate the age of puberty as being most frequently either the real commencement of the disease, or at all events the period at which it was first appreciated by the patient or her friends. These figures practically correspond with Greville Macdonald's,* who gives seventeen as the average age for the appearance of the disease.

3. *Sex of patient.*—There were forty-nine females and eleven males.

4. *Sexual functions.*—In females it was the exception to find them not suffering from leucorrhœa or amenorrhœa, and in every instance the nasal phenomena were intensified at the menstrual flow. In two cases the disease was actually dated with the menopause, whilst more than half the number associated the commencement of the trouble with the establishment of the catamenia.

5. *Family history and heredity.* As previously

* *Journal of Laryngology*. Vol. VII., p. 177.

† Burnett's "System," Vol. I., p. 677.

‡ "Diseases of the Nose and Throat," Vol. I., p. 168.

* "Diseases of the Nose," p. 136. 1890.