

proliferation of perivascular histiocytes with a formation of nodules rich in lymphocytes and plasma cells of local origin.

When the allergen is of microbic nature the toxic factor can intervene to determine the appearance of other particular reactive cells, such as epithelioid cells and the giant cells of tuberculous allergy.

When the allergen is chemical in nature, as happens with certain drugs, the tissue alteration assumes particular characteristics of a clear edematous nature with absence of cellular reactivity as is seen in the hypersensitivity to chlorpromazine.

ALLERGIC APPENDICITIS *by* Prof. L. BUSINCO (Rome)

Summary

Histological investigation suggests that frequently, appendicitis etiologically is allergic.

Through a probable process of sensitization to alimentary heterogeneous proteins, the appendix may develop hypersensitivity crisis, macroscopically characterized by edema and congestion, and microscopically by eosinophil infiltration, perivascular histiocyte proliferation, edema of germinative centers, etc.

The diagnosis of these forms, from a clinical view point, can be helped when there are correlations with appendicular pain with the ingestion of allergenic foods. There is an etiological relationship between the latter and essential colitis.

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HISTOPATHOLOGY OF CHRONIC PURULENT MAXILLARY SINUSITIS IN PATIENTS WITH NASAL ALLERGY

By

Dr. M. G. C. FRANSSEN
(Venray)

Since Spain's report in 1924 an ever increasing number of authors believe, that allergic changes of the nasal mucosa are the main cause of the chronicity of sinusitis (Hansel 1936, 1953, Davison 1944, Shambaugh 1945, Van Alyea 1957). In an extensive examination of 255

patients with sinusitis (Franssen 1956), the relationship between nasal allergy and purulent sinusitis has been observed.

Although there are, without doubt, other reasons for the chronicity of sinus infections (specific, anatomical, odontogenous), these could be excluded to such a large extent that it may be accepted, that most of the chronic sinus infections, especially the two-sided cases, develop on an allergic base. The following table gives an impression of the frequency of allergic criteria in patients with purulent sinusitis.

TABLE 1
Frequency of criteria for allergy in 255 patients with sinusitis.

	Unilateral (91 cases)	Bilateral (164 cases)
Eosinophilia of nasal secretion	32 %	67 %
Positive personal history	32 %	47 %
Allergic aspect of nasal mucosa	15 %	20 %
Positive skin test to inhalation allergens	45 %	36 %
Positive family history	36 %	43 %

In many cases more than one of these criteria were present.

Sinus infections with irreversible allergic changes of the mucosa are operated on very often, as is shown in Table 2.

TABLE 2
Frequency of operations in allergic and non-allergic sinusitis.

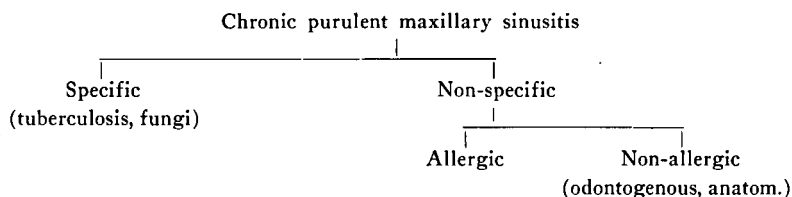
	Luc-Caldwell	Claoué
Allergic sinusitis (164 cases)	22 %	29 %
Non-allergic sinusitis (91 cases)	9 %	20 %

Chronic purulent sinusitis is a disease very suitable to study the histopathology of tissue, chronically inflamed both by allergic and bacterial agents. It is important to know to which degree the original allergic tissue changes are masked or altered by the superimposing bacterial infection. Especially, because clinically in many cases of allergy, complicated by bacterial infection, the allergic symptoms diminish or disappear. Patients with allergic rhinitis will sneeze less, the blood eosinophils decrease and the typical allergic aspect of the nasal mucosa disappears.

A similar situation occurs in asthma patients with chronic purulent

bronchitis. The attacks of dyspnoe and the eosinophils in the blood may disappear completely. Histopathological and cytological investigation could perhaps trace the primary allergy, which is necessary for giving a rational therapy.

Since the end of the 19th century many authors have tried to create a histopathological classification of the chronic sinus infections, which never succeeded satisfactorily (Uffenorde, Manasse, Tilley, von Eickhoff etc.). The only possible classification appears to us to be the following based on the pathogenesis.



Our investigation is limited to non-specific allergic sinusitis. It concerns 24 operated maxillary sinuses. In every patient a rhinological, röntgenological, bacteriological and allergological investigation was made before the radical operation.

The following stains were used: Haematoxylin-eosin, Weigert's stain, Lendrum's stain for eosinophils and McCallum's stain, which is very suitable for recognizing *Haemophilus influenzae* in tissue. This Gram negative rod was often found (in about 50 % of 215 cases) in the contents of chronic infected maxillary sinuses.

Microscopically the picture was in general fairly monotonous. The epithelium was often strikingly normal with the number of goblet cells increased. Metaplasia of the normal cylindrical ciliated epithelium in stratified squamous epithelium was seen in 4 preparations.

All the 4 cases with metaplasia had fetid sinus infections, five of which were present among the total number. This means that there is a significant correlation between metaplasia and a fetid character of sinusitis. The same correlation was found by Mulder & Hers (1955) in chronic purulent bronchitis. They suggest the possibility that the metaplasia is primary and creates a favourable environment for the mixed flora from the nasopharynx. We think that the same theory can be applied to fetid sinusitis. Odontogenous causes could not be demonstrated in any of these cases. The basement membrane was thickened in half of the cases. Desquamation of the epithelium was seen regularly,

but mostly as a typical artefact. The most important allergic tissue changes viz. oedema and eosinophilia were observed in resp. 18 and 19 of the preparations, i.e. in about 70 %. The oedema was especially located in the subepithelial zone.

The cellular infiltration of the tunica propria besides the eosinophils consisted of plasma cells and lymphocytes with only a few scattered polynuclear neutrophils. The norms for tissue eosinophilia cannot be determined exactly, because the number of eosinophils must always be evaluated in connection with the rest of the infiltration. We consider the number of eosinophils pathological when locally more than 5-10 % of the cells consisted of eosinophils. Also the occurrence of groups of 4 or more eosinophils can be regarded as pathological. In 6 preparations more than half of the infiltration were eosinophils.

In all cases with tissue eosinophilia we also found before the operation a secretion eosinophilia.

Weigert's elastin stain did not reveal anything of importance. The elastin was found in rare subepithelial clews, as seen also in normal mucosa. Fibrosis was seen in 8 cases and was never coupled with intensive oedema. In half of the cases lymph-follicles were present.

The tentative conclusions from this investigation are:

- 1) A significant correlation exists between metaplasia and fetid sinusitis.
- 2) Tissue eosinophilia and oedema can be recognized in most cases of chronic purulent infection superimposed on allergic sino-rhinitis.

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HISTOLOGY OF NASAL-POLYPOSIS *by* Dr. H. KIMMEL, (Amsterdam)*Summary*

After establishing what is meant by nasal polyposis in a restricted clinical sense, the author enumerates and discusses their various histological characteristics. Special attention is paid to the occurrence of plasma-cells. Eosinophilic cells are not considered as a characteristic of an allergic cause of the polyp.

HISTOPATHOLOGY OF THE URTICARIA WHEEL

by Dr. J. VOSSENAAR (Utrecht)

Data were given about the result of the histological examination of wheals in cases of genuine urticaria, strophulus, dermatographia elevata, cold allergy, immediate skin-reactions, delayed skin-reactions (bacterial), histamine wheals.

Meeting, December 13th 1958. Leyden

R. Voorhorst (Leyden): Some causes of eosinophilia.

(From the E.N.T. Department of Leyden University.

Head: Dr. H. A. E. van Dishoeck).

THE INFLUENCE OF NON-SPECIFIC FACTORS ON THE
NASAL MUCOUS MEMBRANES IN PATIENTS
WITH RHINITIS VASOMOTORIA

By

L. A. J. VAN LIER

We have tried to determine whether the sneeze-reflex-threshold in patients with rhinitis vasomotoria atopica differed from that in patients with rhinitis vasomotoria non-atopica.

In this experiment pepper nigrum was used, but a sneeze-reflex-threshold could not be determined because many persons did not react to the pepper by sneezing. Other signs, however, were observed, e.g. a swelling of the mucous membranes and/or secretion.

Two concentrations of pepper were used:

- (1) a mixture of 1 mg pepper and 19 mg amyllum oryzae,
- (2) a mixture of 10 mg pepper and 10 mg amyllum oryzae.

These mixtures were blown into the nose so that a thin layer of powder

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