

PROCEEDINGS

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Chairman: Prof. dr. H. A. E. van Dishoeck

THE COMPARISON OF DIFFERENT IMMUNOLOGICAL
ANALYTICAL METHODS

by R. H. CORMANE (Leyden)

Among the methods for qualitative comparative analysis in immunology are Ouchterlony's agar diffusion method and immuno-electrophoresis in gelified media described by Williams and Grabar.

The last two authors have combined zone-electrophoresis in gelified media with the Ouchterlony immuno-chemical analysis.

These methods allow visualisation of precipitation-reaction in such way that different antigen-antibody systems can be separately observed.

This has opened the way in principle to an analysis of the different antigen-antibody combinations in their relationship with certain protein-fractions.

FOCAL INFECTION AND ALLERGY

by Prof. Dr. H. A. E. VAN DISHOECK (Leyden)

A chronic focal infection may cause physical injury by

- (1) Bacteraemia, in which the germs nestle in a remote organ, as in the case of endocarditis. The infected thrombus in the focus probably plays a part in the process.
- (2) Toxaemic organ-injury, as in diphtherial myocarditis.
- (3) Allergization of the organism by the bacterial proteins.

In the allergic diseases, sensitization predominates over immunization. Acute articular rheumatism often occurs after angina. It may be assumed that, in that case, bacterial products enter the blood, because

temporary bacteraemia has been demonstrated after tonsillectomy, and because this operation too is often followed by a rheumatic attack. The number of patients whose first attack of asthma occurs after an infectious disease is large. This points to a connection between bacteria and asthma. Bacterial allergens, together with nutritional allergens, are probably partly responsible for attacks and deviations in the mucous membranes. Bacterial allergens may provoke mucous reactions not only through the bloodstream but also by entering the air passages via the nose or throat. For this reason removal of the infectious foci, e.g. tonsils and infected sinuses, as well as the restoration of normal breathing through the nose are desirable. The occurrence of attacks as a result of the operation should be prevented by means of antibiotics and spasmolytics. Such attacks argue for the connection between the focus and the disease, rather than against the performance of the operation. Collective statistics, comparing results of operations with non-operated cases, are worthless, because it is the former group that comprises the serious cases that are likely to get repeated attacks from other causes. The indication to operate must therefore be considered with respect to each individual case; in this, the focal phenomena should be the deciding factor, the expectation of the therapeutic result being a secondary consideration.

Multiple skin infection of an animal with haemolytic streptococci may cause an affection resembling rheumatism. The focal theory, however, more closely corresponds to the Schwartzman phenomenon. After injection into the skin of a bacterial filtrate—or even after mere injury to the skin—a subsequent intravenous re-injection, at the place of the first injection, produces the phenomenon of Arthus. A different bacterial filtrate, too, may yield the same result. When applied to the focal theory, this means that, on the assumption that it was the focus that caused the sensitization, the attacks need not necessarily be provoked by the same bacterium, and from the same focus. The bacterial nucleo-proteins are only slightly specific. This explains why attacks may persist even after the removal of a focus.

A sound experimental basis has also been found for the localization of the disease in some organ. When a specific organic toxin is added to the allergen, its injection into a sensitized animal will result in a localization in the organ in question. An example of this is the addition of caffeine, followed by the occurrence of an allergic cardiac reaction.

ALLERGY IN CHRONIC PURULENT MAXILLARY SINUSITIS

by M. G. C. FRANSSEN (Leyden)

In the literature, greatly differing figures of sinusitis in which nasal allergy is accepted as an important aetiological factor, made us carry out our own investigations.

66 patients with unilateral or bilateral purulent maxillary sinusitis were examined for co-existent nasal allergy. As objective criteria eosinophilia of the nasal secretion and/or positive skin reactions to one or more allergens were accepted. A distinction was made between uni- and bilateral sinusitis. In the bilateral cases (41), allergy was demonstrated 28 times (almost 70 %) among which in 25 (almost 61 %) patients a positive nasal eosinophilia was found. In the unilateral sinusitis (25 cases), allergy could be demonstrated in 6 cases (4 times a positive nasal eosinophilia).

The aetiological importance of a proved allergy of the nose is made plausible as well as the greater frequency of nasal allergy in bilateral sinusitis.

A bacteriological comparison between "allergic" and "non-allergic" purulent sinusitis, which so far as is known has never been made previously, brought to light the surprising fact that all cultures in which a *Pneumococcus* as well as *H. Influenzae* were isolated, were taken from bilateral sinusitis. Allergy could be demonstrated in 80 % of these cases. The allergic appearance of the nasal mucosa and the presence of thickened mucosa on the X-ray pictures of the para-nasal sinuses appeared to show no significant difference between "allergic" and "non-allergic" sinusitis.

Besides the usual therapy of purulent sinusitis, the author stresses the importance of anti-allergic measures when nasal allergy can be demonstrated.

W. J. Quarles van Ufford,
Secretary.

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