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ITCH AND IgE IN ATOPIC DERMATITIS

Georg Rajka

Department of Dermatology, Rikshospitalet, Oslo, Norway

Abstract. It was found that a correlation exists between the values of IgE in the serum and the duration of experimental itch elicited by trypsin in 20 patients with atopic dermatitis.

Key words: Experimental itching; Trypsin; IgE

The aim of the study was to investigate whether there is a correlation between itch and high IgE levels, since elevated serum/IgE was found in the majority of common dermatitides (1). In addition, it was assumed that persistent scratching can lead to a rise in the IgE level.

MATERIAL AND METHODS

20 adult atopic dermatitis patients with severe skin lesions were investigated. Determination of IgE in serum was performed by the usual PRIST method. Intensity of itch was determined by the duration of itch after intracutaneous injection of 0.1 ml trypsin 1:10 000 in the uninvolved skin of the arms (2).

RESULTS

According to Fig. 1 a positive or negative correlation existed between the level of IgE and the degree of experimental itch in atopic dermatitis patients.

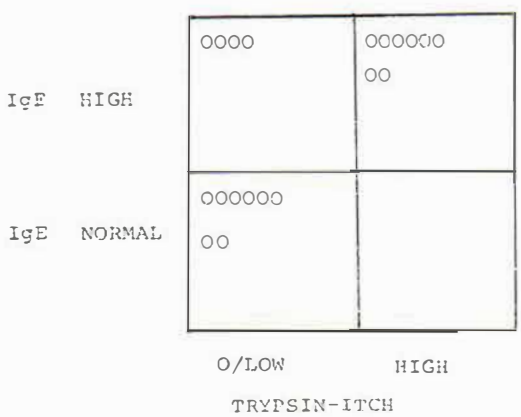

Fig. 1. Correlation between experimental itch and IgE. Open circles denotes patients with atopic dermatitis.

DISCUSSION

Experimental itch shows a fairly good correlation to clinical itching (2). According to the results, there is a parallel between high IgE levels and the main symptom of the disease, i.e. severe itch, in atopic dermatitis patients. It is not known whether there is a causal correlationship between IgE and itch, but presumably these two parameters of the disease merely reflect the severity and/or extent of the atopic dermatitis.

REFERENCES

1. O'Loughlin, S., Diaz-Perez, J. L., Gleich, G. J. & Winkelmann, R. K.: Serum IgE in dermatitis and dermatosis. Arch Dermatol *113:* 309, 1977.
2. Rajka, G.: Itch duration in the uninvolved skin of atopic dermatitis (prurigo Besnier). Acta Dermatovener (Stockholm) *48:* 320, 1968.

DISCUSSION

Barnetson (Edinburgh). Q: Most patients with severe atopic eczema tend to have the highest IgE concentrations. But the concentrations remains pretty constant, whether they be in exacerbation or remission. This, I think, speaks against the thesis of correlation between itch and IgE.

A: My personal view is that IgE levels are not so constant, but this point was not investigated here.

Zachariae (Aarhus). Q. How does medication influence your assay?

A: The patients were not given medication during the study.

Voorhees (Ann Arbor). Q. Would it be feasible to inject IgE into normal individuals and atopic dermatitis patients to see if the injection of IgE might precipitate itching.

A: Many circumstances may affect such an experimental design.

Atherton (London). Q. How much are the levels of IgE influenced by the presence of other atopic diseases, particularly respiratory atopy?

A: The patients were pure atopic dermatitis subjects.

Q: In Italy we have an epidemic of helminthiasis in young children with atopic dermatitis. Is there any evidence of the same here in Scandinavia?

A: No helminthiasis was found in this material.

Aly (San Francisco). Q: In atopic dermatitis there is a large population of staphylococci and they are responsible for producing toxins and metabolites which can be itchy. In the literature there are indications that when the *S. aureus* population is reduced, itch is reduced.

A: I agree.