

THYMOSIN-INDUCIBLE 'NULL' CELLS IN ATOPIC CHILDREN

N. A. Byrom

Department of Chemical Pathology, Westminster Medical School, London, England

Thirty children with atopic asthma, thirty with atopic eczema and thirty normal children, all age-matched, were compared. The mean peripheral blood T-lymphocyte level was $1\ 740/\text{mm}^3$ in the normal group, but significantly lower in the asthma group (mean $970/\text{mm}^3$; $P < 0.0001$) and in the eczema group (mean $1\ 197/\text{mm}^3$; $P = 0.003$). The T-lymphocyte deficit in both atopic groups was abolished *in vitro* by foetal calf serum or by thymosin, a bovine thymic hormone extract. Analysis of the data from other authors confirms that a T-lymphocyte deficit exists in atopy but is not normally detected when foetal calf serum (or other serum) is used in the E-rosette assay for T-lymphocytes. Positive correlations were found between plasma IgE levels and: severity of atopy, and peripheral blood eosinophil levels. Thymosin-inducible T-lymphocyte (T_i) level correlated strongly with plasma IgE level, suggesting that these T_i -cells may be immature (or blocked) suppressor T-cells. If this T-lymphocyte deficit, whether of a primary or secondary nature, represents

inadequate suppression of IgE responses, then a clinical trial of thymosin may be warranted.

Key words: Thymosin; Thymic hormones; T-lymphocytes; Suppressor cells; IgE regulation; Atopy

DISCUSSION

Bonifazi (Bari). Q: We know that total unspecific IgE can persist at high levels also when the atopic dermatitis has cleared. What about the behaviour of T lymphocytes after the recovery of atopic dermatitis?

A: All our patients were studied in active phase of the disease, so I can't tell you what happens when they go into remission. There is a general trend, but not a hard and fast correlation between T cell levels and IgE levels.

Barnetson (Edinburgh). Q: In our studies we found that patients with eczema alone tended to have normal eosinophil counts and those with respiratory allergy tended to have the highest eosinophil counts. Did you try to divide your patients into those with pure eczema without — and those with respiratory allergy?

A: No, but we will look further at that problem.