

## HIGH FREQUENCY OF HEREDITARY COMPLEMENT DEFECTS IN ASSOCIATION WITH ATOPIC DISEASES

A. Giannetti

*Department of Dermatology, University of Pavia, Pavia, Italy*

Soothill and Harvey have identified a hereditary immunodeficiency (the yeast opsonization defect) present in the population at genetic polymorphism frequencies, in association with atopy and recurrent infections.

We have studied the complement system in 88 atopic children (including 42 atopic dermatitis cases) by means of several functional tests. Two of these, the "yeast opsonization" test and the "rabbit erythrocyte lysis" test measure two independent mechanisms of activation of the alternative pathway of complement. About 70% of the atopics are defective in at least one of the two tests. Among the atopics who are normal at both tests, some present a functional deficiency of C<sub>2</sub> (and are presumably heterozygotes for a C<sub>2</sub> allele), whereas others present a selective deficiency of immunoglobulins of class A.

Thus, the combined use of a number of immunological tests allows the identification of a biochemical defect (different from the presence of

"regainic antibodies") in the large majority of atopic patients.

### DISCUSSION

*Strannegård* (Göteborg). Q: I understood that there is a faulty functioning of the alternate pathway of complement activation and this must result in a defective killing of virus-infected cells. One would expect atopic individuals to have more persistent virus infections. Does anyone know about frequencies of persistent viral infections in atopic individuals?

A: I have no data on that.

*Saurat* (Paris). Q: If complement were implicated in atopic dermatitis, would one not expect to have a higher frequency of atopic dermatitis in complement deficiency?

A: A total complement deficiency is one thing, but the alternative pathway complement deficiency is quite another. We do not know a great many things about the latter and diseases. There is no report in the literature about the defect of alternative pathway complement activation and diseases.

*Saurat* (Paris). Q: What does exactly yeast opsonization measure?

A: This test has been described and is performed as a marker of alternative pathway complement effectors.