TWINS IN MEDICAL GENETICS

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The Twin Clinical Method in Dermatology*

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Genetic skin diseases have been considered with respect to their population and family frequencies, as well as to their concordance values, in MZ and DZ twin pairs. The clinical evolution of the disease has been further considered in its various stages and compared in MZ and DZ twins, concordant for the disease.

The material consisted of 100 twin pairs, with at least one member affected, subdivided with respect to concordance and zygosity. For each dermatosis, then, the population and family frequencies have been calculated. The following dermatoses could be studied: psoriasis, acne vulgaris, keratosis pilaris, alopecia areata, epidermolysis bullosa and dermatitis seborrheica.

A high concordance of clinical evolution in MZ twins has appeared to correspond to a low frequency of the disease, while a high frequency appears to correspond to low concordance values. This finding may be very useful for a better understanding of the disease's inheritance, as well as of its penetrance and expression.

It has been finally possible to evaluate the hereditary quantum vs. the environmental one in the determination of a dermatosis, by means of Holzinger's coefficient of heredity (H). The estimates of the latter vary from 35 to 50% in the various dermatoses examined.

* The full paper has meanwhile been published as follows:

R. Cavalieri (1969). Indagine genetica comparativa con il test clinico-gemellare in dermatologia. Cronache dell'I.D.I., 24: 177-185.

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