THE TEACHING OF HANSENOLOGY

EDITORIAL

The collection of clinical information gathered during these last 40 years in the field of Hansenology — starting with the outstanding concept registered in the polarity theory of Francisco Eduardo Rabello up to the remarkable contributions that Immunology and Immunoprophylaxis have provided — is now demanding a new and more adequate approach, adapted to our present reality, from those engaged in teaching hansenology in and out of the universities.

Up to now the teaching resources that have employed-i.e. examination of patients in academic classes, audio-visual lectures or even theoretical- - practical discussions — have all stressed the clinical polar types. We agree that these types must be shown and taught. However on the other hand we defend the idea that it is absolutely necessary to raise in the graduates' and post-graduates' minds the indispensable discernment to diagnose incipient cases either by routine dermatological examinations or by the neuro-dermatological ones carried out in contacts. To diagnose polar types usually means to register patients already presenting stigmatizing and deforming irreversible lesions, when classified in the tuberculoid polar type, or those that presenting the long evolutive Virchowian type may have infected other contacts usually at the rate of five percent a year. Thus it seems necessary to emphasize the importance of the early diagnosis in the teaching of hansenology, having in mind either the practical sense and the speculative point of view, searching in this way for the subclinical infections based on the immunological methods.

On the practical side the bases that can solidly establish the clinical suspicion of hanseniasis are the accurate dermatological examinations, search for early neurological changes, routine examination of the superficial nervous fibers in search for neural thickening. On the speculative side, the systematic bacilloscopic examinations carried out in contacts coming from uncontrolled hansenogenic focuses and not yet presenting any suspicious lesions may rapidly point out those infected but still in a subclinical state. These statements can be expressed according to our own observations made during the period of 1947-1948 at the observation ward of the former "Sanatório Cocais" which though not published were confirmed by the studies of Figueredo and Dersai (1951) and of Dharmendra (1955).

The systematic immunological study of the contacts has proved to be of great value as it may bring to light the numerous cases of those infected but still in a subclinical state and who will certainly become future hanseniasis patients.

It is obvious that hanseniasis must be prematurely diagnosed since the early therapy is the only way to

prevent the patients from exposing themselves to excessive infection when living together with highly infectious and therapeutically uncontrolled Virchowian cases or from infecting other people by arresting the course of the disease. The early diagnosis and treatment would also prevent cases developing into the tuberculoid pole from reaching the stage of stigmatizing and deforming lesions.

The systematic search for cases in subclinical state carried out by general practitioners and mainly by dermatologists and hansenologists can decisively influence on the attempt to overcome the hansenic endemy. As a result of this, the statistical figures might not register the high rate of about seventy percent of polar types among the new cases, just to express the Brazilian figures. Besides, the physicians would become conscious of problems concernig public health and, as a final consequence, Brazil would abandon its dishonourable place among the countries presenting a high endemicity rate of hanseniasis, according to statistics published by the World Health Organization.

Estevam de ALMEIDA NETO

GENETIC POLYMORPHIC SYSTEMS AND HANSENIASIS

EDITORIAL

Up to the present the following genetic polymorphic systems were analysed in samples of Hansen's disease patients : ABO, Rh, MNSs, P, Kell, Lewis, Duffy, Kidd and Diego blood groups; secretion of ABH substances; taste sensitivity to phenylthiourea; S hemoglobin; beta-thalassaemia; glucose – 6 - phosphate dehydrogenase; phosphoglucomutases 1, 2 and 3; glyoxalase; properdin factor B; acid phosphatase; adenosine deaminase; esterase D; adenylate kinase; glutamic pyruvic transaminase; 6-phosphogluconate dehydrogenase; haptoglobins ; transferrins; group specific protein; beta-lipoprotein Ag; alpha-l-antitrypsin ; ceruloplasmin; beta-2-glycoprotein I; third component of complement (C_3) ; Inv antigens; pseu-docholinesterase; HL-A antigens. Of course, these almost forty polymorphisms were studied with the hope of finding associations between hanseniasis and genetic markers. However, most of these investigations provided negative or controversial results, while very few have shown associations of disputable importance.

The negative results were indeed expected with greatest probability 1, 2, since most of the genetic polymorphisms were chosen for study without a logical indication that susceptibility to hanseniasis might depend upon the polymorphic genes under investigation. Concerning the conflicting results, they may be most probably attributable to large sampling fluctuations due to small samples, to racial and geographical variations, to inappropriate controls and to variation in the composition of the hansenic samples. Thus, some of them included only Virchowians patients, others were composed of patients belonging to both polar types of hanseniasis, others included all forms of hanseniasis, and so on.

At any rate, such types of studies, in spite of being relevant for some geneticists, are useless for practical hansenologists. As a matter of fact, even if an association between a well-known polymorphic system and hanseniasis could be demonstrated beyond any doubt, this association would only serve to indicate that hanseniasis is one of the several forces that are maintaining the analysed polymorphism. However, the practical hansenologists, who are interested in the applications that Genetics may provide to Hansenology, will make no use of such information, since it has no value for diagnostic and prognostic purposes. Therefore, in our opinion, the choice by hazard of genetic polymorphic systems for investigation in hanseniasis should not be stimulated among hansenologists.

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At the present status of knowledge we think that the only polymorphic systems that should deserve the attention of hansenologists are the glucose-6-phosphate dehydrogenase (G-6PD), dapsone acetylation and methemoglobin NADH reductase. Of course, such polymorphisms should not be investigated with the aim of finding associations between them and hanseniasis, but with the main purpose of verifying the pharmacogenetic response to dapsone presented by patients with G-6PD deficiency, slow and rapid dapsone acetylators, and patients who are heterozygous for the NADH reductase deficiency gene [3].

Bernardo BEIGUELMAN

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(4) Departamento de Genética Médica, Faculdade de Ciências Medicas, Universidade Estadual de Campinas, C.P. 1170, 13.100, Campinas, SP.