

THE FORMATION OF INVESTIGATION CENTRES AND TREATMENT OF ALLERGIC DISEASES¹

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The recent 1st International Congress of Allergists held in Zurich in September last, with approximately 1,200 doctors coming from all over the world, showed not only the universal distribution of allergic diseases but also how they have become a scourge that has to be fought energetically and efficiently.

Until recently allergic phenomena have been considered a pathological accident. But when studied from the clinical, experimental and therapeutic aspect, they have assumed such importance that the responsible authorities of some countries such as the Northern U.S.A. have acknowledged the necessity of establishing allergy as an indispensable speciality in training in each of its 71 medical schools.

Professor Samuel M. Feinberg* states "Try to imagine the whole population of London and Paris suddenly attacked by pollinosis or other manifestations of hay fever and that will give you some idea of the importance of this problem in the U.S.A. to-day." So it can be understood that it is necessary to know and improve the very sensitive techniques of diagnosis and treatment allied to the knowledge of the theories of anaphylaxis, of the Arthus phenomenon, of the freeing of

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histamine, of endocrine upsets, etc. that will occur in a general practitioner's practice of general or internal pathology, infectious diseases, paediatrics, neurology, dermatology, otorhinolaryngology, rheumatology, the study of pulmonary tuberculosis or any of the other branches of medicine.

Allergy – is from the Greek word meaning “other reaction”. It follows from a previous sensitisation (at times while “in utero”) based on an antigen-antibody reaction which manifests itself as a hyper or hyposensitivity in the presence of an antigen primarily not toxic.

The work of Richet and Portier in 1902 on the effects of poisons in dogs led to the conception of anaphylaxis (from the Greek *ana* meaning contrary and *phylaxis*: protection) as opposed to immunity which in the opinion of my teacher Pasteur Vallery-Radot, implies sensitisation. The individual is sensitised for a particular substance in the mixed state of immunity and hypersensitivity in which it appears to us that anaphylaxis is a simpler process.

Sensitisation is due to the fact that antibodies from the substance we call antigen or allergen have developed in the organisms. This is different from intolerance or hyperergia to a small or normal amount of a substance generally a drug producing an exaggerated physiological response.

Hyperergia—according to Pasteur Vallery-Radot and his collaborators, is a quantitative reaction unlike allergy which is a qualitative one. Hyperergia is poisoning not sensitisation.

In most allergic cases sensitisation comes on insidiously and slowly. Patients live for many years in contact with the antigen without ill-effects until without obvious cause the symptoms start. More rarely sensitisation occurs suddenly because of some incident such as absorption of some bad food, local irritation of a mucous membrane, injection of the antigen, alteration in the patient's general state, violent emotions, etc. Before diagnosing allergy it is necessary always to find the responsible allergens. This is done by skin tests with extracts of allergens made in the laboratories. Vegetable or animal antigens or those from certain drugs that enter the

body through the respiratory, digestive, cutaneous or circulating systems may cause allergic complaints but their actual mode of action is unknown.

All the antigens or allergens provoke the appearance of *antibodies* or reagins which go into the circulation—hence humoral allergy—and fix themselves on an organ or tissue which can be called the *shock tissue or organ*.

The introduction into the body of an antigen causing an antigen-antibody reaction in the blood stream as well as the sensitised organ, gives rise to shock with the liberation of histamine. The investigations of Fiessinger, Loeper, Halpern and others show that the increase in organic histamine is the cause of allergic syndromes. Though this is true in certain cases of hay fever, urticaria, Quincke's oedema, skin complaints, hemicranias, migraine, conjunctivitis, colitis, etc., which are helped by the synthetic antihistaminics, it is not proved for all other cases. Hence the necessity for a careful and patient study of each individual which means considering each case on its own merits.

There are many different aspects to be considered from the hereditary factor, confirmed in 80 % of the cases, to the differences produced by physiological alterations in activity of a poorly functioning liver, so that ultimately each patient has not only his allergens to be considered but also his own allergic diathesis.

How many asthmatics, eczematous patients, cardiacs, tuberculous, epileptics, rheumatics, and others do not owe their complaint to their allergic constitution and predisposition? Therefore, besides desensitising an allergic complaints the constitutional or other abnormalities of the patient must be considered.

Medical men from all parts of the world—from Finland to South Africa, from the Americas and Australia to far Indonesia—came to Zurich in the heart of Switzerland, bringing their experience and knowledge to confirm the medico-social importance of allergic diseases. Ignored in the past but classified as allergic were some cases of spontaneous abor-

tion and certain disorders of the central nervous systems. UNESCO has produced figures to suggest that 40 % of the total population of the world is effected. The 1st International Congress of Allergy suggested that the fight against this complaint which treacherously installs itself and attacks humanity in various ways, should be intensified.

Great loss of work in the community due to relative incapacity of some of its members also interested the authorities. Once an allergic syndrome has been diagnosed it must be remembered that allergy always depends on the presence of antibodies and these only appear as a result of an antigenic stimulus. All writers are agreed on this. Hansen for example states "The criterion that all active Allergy of infants or adults has been unquestionably all acquired by active sensitisation is justified." Antigenic investigation is carried out by means of *direct* or *indirect* tests. In the first are used among others the scratch and intradermal and nasal reactions, in the second the passive transfer technique of Prausnitz-Küstner and of Koenigstein-Urbach.

When carrying out the tests the specific allergen should be applied preferably to the shock organ, because negative skin tests are found for instance in cases of hypersensitivity localised to the mucous membrane.

Often skin tests are negative because it is impossible to place the allergen in contact with the shock tissue or of chemically or biologically isolating the causal allergen which is frequently of a secondary or endogenous nature. This makes us agree with Urbach "A substance should only be considered as a casual agent of a determinate case when the suppression of contact with that substance is followed by the disappearing or manifest remission of the allergic symptoms (a test of suppression, elimination or separation) or when, on the other hand, the allergic manifestations appear and become irritated in appearance before a new exposure to allergen through the mouth, inhalation, cutaneous application or injection (tests of exposure and re-exposure)."

The multiplicity of symptoms seen in allergic disorders

such as arthritis, periarteritis, phlebitis, serositis, endocarditis, myocarditis, glomerulonephritis, erythema nodosum, purpura infecciosa, rheumatic symptoms, arthralgia, metabolic upsets, eosinophilia, phlyctenular conjunctivitis, epilepsy, Menière's vertigo, paleness, hyperaemia, prurigo and pruritus, erythemas, eczemas, dermatitis, urticaria, Quincke's oedema, purpura, colics, dyskinesia, secretory upsets, gastritis and acute enteritis, muco-membranous colitis, oedema of the glottis (pharyngo-laryngitis, tracheo bronchitis, asthma, arritmia paroxistica, infectious manifestations and general and local inflammation, oedema of the lungs, general circulating shocks, vascular spasms causing a fall of arterial tension, tachycardia—all these symptoms make us interested in many aspects of human pathology, and to classify allergy in the present state of our knowledge and according to their aetiology as follows:—

- (a) Bacterial (infectious allergy).
- (b) Non-bacterial (exogenous allergy). The various causes capable of causing them are:—
 - (a) Physical (pressure, traction, cold, heat and atmospheric factors).
 - (b) Chemical (nettles, histamine, peptone, etc.).
 - (c) Hormonal.
 - (d) Psychogenic influences and nervous reflexes (with their concomitant phenoma of asthma, urticaria and eczema).
 - (e) Various allergens (inaminate exteriors, parasites, etc., etc.).

Contributions from all parts of the world were received at the 1st International Congress of Allergists at Zurich.

The following themes were discussed to a greater or lesser extent "Nature and social importance of allergic diseases", "The histological study of allergic lesions", "Allergic diseases and those accompanied by sensitivity phenomena", "Geographical distribution of allergic diseases", "Allergy of the cardio-vascular system", "Allergy of the kidneys", "Chemical and serological studies of allergy", "Pathogenesis of aller-

gic reactions", "Places of antibody formation", "Biological meaning of complete and incomplete antibodies", "Nature of sensitivity to dusts", "Quantitative considerations about specific sensitisation and hypersensitisation", "About constitution and heredity in manifestation of allergic diseases", "Diagnosis of allergic diseases", "Allergy of the skin", "Psychosomatic medicine and allergic affections", "Allergy of the digestive organs", "Pharmacology of allergic reactions", "The physiopathology of asthma", "Standardisation of allergens", "Interpretation of allergic reactions", "Allergy of the respiratory organs", "Allergy in helminthic infections".

In this last heading the work of *E. Diaz Carrasco* of Santiago of Chile about "Allergic manifestations of parasytosis", of *N. Lass* of Tel-Aviv on the "Casoni test in Equinococcal disease", of *J. M. Quintero Fossas* of Havana about "Serological and pulmonary reactions of the parastic allergens", and of *O. Henrique de Franca* of San Paulo on "Allergy in helminthiasis" helped to elucidate Loeffler's syndrome. Medical men all over the world and particularly where it is endemic, relate the syndrome to tropical eosinophilia which is characterised by paroxysmal cough, frequent asthmatic attacks, debility, anorexia, loss of weight, leucocytosis and accentuated eosinophilia.

Symptoms like asthma show on a radiological examination of the chest, identical signs as those of acute miliary tuberculosis or of small broncho-pneumonic foci. They are of unknown aetiology but because they respond spectacularly to arsenotherapy, they remind us of a spirochaetic or protozoic origin. Other parasites such as ascaridae, amoebiasis, fasciola, hepatica, ancylostoma brasilienses, strongyloidiasis, necator americanus, can also cause Loeffler's syndrome, the origin of which seems clearly allergic.

In spite of all the discoveries of medicine we have not yet found a panacea which is capable of ridding us of this infirmity. We agree with Sanches Cuenca the famous Spanish allergist, first we must know how to use the existing means at our disposal to modify the allergic constitution. This will

only be possible by careful and accurate observations of the surrounding conditions and of the causative factors.

All that has just been stated without going deeply into details which would lead to the compiling of a voluminous treatise on medical pathology, was suggested to me at the 1st International Congress at Zurich, where I had the honour of being one of the representatives of Portugal.

From what has been stated it seems to be possible to conclude:—

- (1) Allergic diseases are universal and attack, according to statistics elaborated by the International Association of Allergists, 40 % of the population of the world.
- (2) The allergic patient being essentially dominated by his surroundings, can hardly manage to free himself owing to ignorance of the actuating causes.
- (3) Centres of investigation and Treatment of Allergic Complaints ought to be created, particularly in highly civilised countries, so as to confirm the general and specific diagnosis of allergy, and to establish the existence not only of its constitutional factors, but also of its predisposing localities and proceed with its rational treatment.

RÉSUMÉ

L'auteur qui a assisté récemment à Zurich au premier Congrès International des Allergistes comme délégué du Portugal a eu l'occasion de constater par ses rencontres avec les délégués des divers pays représentés, l'énorme importance que l'on donne désormais à la lutte contre les maladies allergiques.

Après avoir décrit les phénomènes allergiques et défini ce que l'on entend par « maladies allergiques », considérées comme modification de réactivité sur le terrain pathologique, l'auteur étudie le rôle du médecin dans la transformation du milieu sensibilisateur dans lequel vivent les malades. Il définit ce que sont les *allergènes*, leur action et les diverses méthodes employées, en dehors de celles que Prausnitz et Küstner présentent.

Il note les maladies professionnelles de certains ouvriers sensibilisés aux allergènes avec lesquels ils sont en contact journalier; les asthmatiques, les eczémateux, les cardiaques et toute la légion de ces malades pour lesquels il est nécessaire de corriger le terrain diathésique.

Ensuite il donne son point de vue sur certaines manifestations allergiques parasitaires, porteurs de échinocoques ou de helminthes, présentées au dit Congrès de Zurich par les docteurs: Diaz Carrasco, du Chili, N. Lass, de Israel, et Henrique da França, du Brésil, et il termine par les considérations suivantes:

- 1° – Les maladies allergiques sont universelles et, selon les statistiques de la International Association of Allergists, attaquent 40 % de la population du globe;
- 2° – Le malade allergique étant essentiellement dominé par son milieu, réussit difficilement à s'enlibérer, ignorant les causes de son état;
- 3° – Il faudrait créer, surtout dans les contrées de plus grande densité démographique des *Centres d'Investigation et Traitement des Maladies Allergiques* ayant pour but de confirmer le diagnostic général et spécifique de l'allergie, d'établir l'existence de ses facteurs prédisposants locaux, aussi bien que de ses facteurs constitutionnels et de procéder à son traitement rationnel.

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