

## EDITORIAL

# What is Clinical Immunology?

Clinical Immunology is a concept often having very different meanings for medical persons from different specialities. Generally it is believed that Clinical Immunology must relate to immunization, vaccines, allergic phenomenon and the use of these in preventive medicine. Microbiologists and pathologists may consider performance of immunological investigations on patients with immunopathological disease as Clinical Immunology while the serologist and community medicine specialist may extend the concept to include epidemiological studies of communicable diseases. To the basic scientist it may mean clinical research in patients of immunological diseases. Looking after the patients with primary immunodeficiency may be Clinical Immunology for the pediatrician while for a surgeon it may be confined to transplantation immunology.

Consensus on this theme is difficult to achieve with the all pervasive immunological process affecting all the systems of the body. Specialists dealing with the nervous system, cardio-vascular, respiratory, hepatobiliary, gastro-intestinal, hematopoietic, endocrine, renal, reproductive, integumentary systems, or with the eyes, ears, nose or dental-periodontal systems which

may be affected by immunological diseases, may equally well claim to be clinical immunologists. Others investigating and treating patients with infections and communicable diseases or yet others studying malnutrition and immunological perturbations due to it may also be considered to be practicing clinical

immunology. The oncologist who is well-versed in the immunology of cancer and with methods of enhancing the immune response to control cancer has as much claim to be called a clinical immunologist as any of those mentioned above. What then is to be semanteme or the modern concept of clinical immunology?

**Table 1 :** Systemic immunoinflammatory diseases

### **I. Systemic connective tissue diseases**

- 1) Systemic lupus erythematosus
- 2) Systemic sclerosis
- 3) Dermato/Polymyositis
- 4) Sjogren's syndrome
- 5) Undifferentiated connective tissue diseases: MCTD, pre - PSS
- 6) Other rare disorders like GVH disease.

### **II. Systemic vasculitides**

- 1) Arteriolitis/Venulitis (Syn. hypersensitivity vasculitis, leukocytoclastic vasculitis, old term microscopic polyarteritis nodosa).
- 2) Small artery vasculitis (erythema nodosum syndrome)
- 3) Medium artery vasculitis (polyarteritis nodosa group, systemic necrotising vasculitis)
- 4) Large artery vasculitis
  - a. Giant cell arteritides
  - b. Non-specific aortoarteritis
  - c. Other aortitides
- 5) Miscellaneous group localized to CNS, lymphomatoid granulomatosis, etc.

### **III. Various systemic rheumatic diseases**

All forms of rheumatoid arthritis and SSA syndrome, psoriatic arthritis, adult Still's disease, juvenile chronic arthritis, Goodpasture's syndrome, Horton's disease, atrophic polychondritis, Cogan's syndrome, systemic urticaria, amyloidosis, Behcet's disease, hypereosinophilic syndromes, Moschowitz disease, chronic systemic enterocolopathies, angioimmunoblastic and immunoproliferative lymphadenopathies of 4 varieties, familial Mediterranean fever.

It is therefore suggested that a broad discipline of MEDICAL IMMUNOLOGY be identified (as originally proposed by IRVINE). It should include within its purview the application of knowledge of immunology and immune response in understanding the (i) epidemiology (ii) etiopathogenesis (iii) in obtaining help in diagnosis, (iv) in the prediction of prognosis, (v) in therapeutic interventions and (vi) in finding out preventive measures in diseases of human beings.

The term CLINICAL IMMUNOLOGY can then be reserved for a branch of medical immunology which specifically deals with the (1) diagnostic (2) prognostic and (3) therapeutic uses of immunological principles and methods in human diseases.

Today a patient of a particular disease is increasingly being looked after by specialists in that area, *e.g.*, neurological diseases by a neurologist, cardio-vascular diseases by a cardiologist, endocrine diseases by an endocrinologist and so on. What then is the scope for the clinical immunologist? Is there a particular

group of diseases of patients for which he owes direct responsibility.

There are a group of "ORPHAN DISEASES" which do not come under any of the known specialties and most of general practitioners have neither the interest nor the expertise to deal with them. There is direct or indirect evidence indicating that these diseases are caused by IMMUNOINFLAMMATION or other immunopathological mechanisms (Table 1). They often show laboratory features of immunoinflammation and frequently demonstrate serum markers by way of non-organ specific autoantibodies. "Generalized autoimmune disease" is a term often used for them, but not all of them have easily demonstrable autoantibodies. "Collagen-vascular disease" is another term often used for these diseases but collagen is not involved in many of them. In some of them the term "systemic connective tissue diseases" is applicable but here again several of them actually show systemic vasculitis. Thus, these are truly 'orphan diseases' without even a suitable name for them. Under these circumstances 'systemic immuno-

inflammatory diseases' is probably as good a designation as any until a more appropriate term evolves. It is the orphan group of diseases for which the Clinical Immunology specialist has particular expertise. It is therefore proposed that clinicians specializing in clinical immunology must be trained specifically in 'systemic immunoinflammatory disease', a clinical area where they can take direct patient care responsibility without conflict with any other clinical specialty and providing immense help to the patients of this area. Of course consultations and advice to other clinical areas would always be taking a large share of their time but they would have a well defined clinical area to look after and practice their art of clinical medicine. The accompanying table gives a list of diseases falling within the purview of such a clinical immunologist.

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