Book reviews

but data from Japan should provide insight into some of the specific environmental and genetic factors involved in the commoner malformations and chronic diseases.

Unfortunately, this book fulfils these hopes only to a limited extent. It is the published version of a symposium and lacks the cohesion of a monograph or deliberate review. In addition, prominence is given to the contributions of a number of invited European and American speakers, which for the most part cover familiar ground and provide little new information that justifies their publication here. An exception should be made of the forceful contribution by Newton Morton on genetic epidemiology, which provides a valuable theoretical basis and a corrective to the view that empirical risks are all that matter in multifactorial inheritance. The Japanese contributions, by contrast, have frequently been condensed into brief summaries, in which the conclusions cannot be backed up by details of ascertainment and analysis.

Despite these limitations, there are some valuable reports. A discussion by Yasuda of the embryogenesis of human limb malformations, based on the abundance of human fetal material, shows that the different types of polydactyly can be recognised at a stage well before development of the actual digits. It is a pity that no data on neural tube defects based on this material were presented. An extensive study of congenital heart disease by Ando *et al.* indicates clear differences in the frequency of the individual types of defect in Japan, as compared with Europe and America, together with some surprising deviations in the risks to sibs from those expected on grounds of multifactorial inheritance. This again might lead one to suppose different environmental factors to be involved, but the adequacy of methods of collecting genetic data has to be questioned, since in this paper no mention is made of how the information was collected, while a similar study of cleft palate relied on questionnaires. In both studies, a recurrence risk lower than expected was found, and one suspects that inadequate design of study may have been responsible.

In addition to the epidemiological surveys, the book contains a number of contributions on theoretical population genetics, notably a paper by Maruyama on genetic load, as well as some interesting experimental animal studies on central nervous system malformations and hypertensive cerebral disease. The impression left by the book as a whole is that the Japanese contributions to theoretical genetics and experimental pathology have not yet been fully applied to the field of clinical genetics, neither has the full potential of Japan for epidemiological and genetic studies yet been recognised.

Finally one has to ask why the publishers have priced this book of 234 pages at £21.25? It is to be

hoped that this deterrent from purchasing the book does not prevent medical geneticists in Europe and America from reading at least some of the more interesting chapters.

PETER S. HARPER

Medical Genetics. Proceedings of the Symposium at Debrecen-Hajdúszoboszló, Hungary, 27-29 April, 1976.

Edited by G. Szabó and Z. Papp. (Pp. 911; Figures + Tables. US \$114.35, Dfl 280.) Amsterdam and Oxford: Excerpta Medica. 1977.

This splendidly produced volume of the Proceedings of the Symposium on Medical Genetics, held at Debrecen-Hajdúszoboszló, Hungary, in April 1976, which well over 200 geneticists from all over the world attended, contains some 112 papers grouped into 5 subjects. The section on chromosome mapping and clinical cytogenetics contains a valuable review of some of the current research in Down's syndrome, some valuable papers on sex chromosome abnormalities and sex determination, and one or two hitherto poorly described syndromes associated with aneuploidy or structural rearrangements, among many other aspects of cytogenetic research. The papers dealing with population genetics and congenital malformations are varied and interesting, especially one on 'Relation between population genetics and population teratology', and some on the genetic aspects of psychiatric problems. Prenatal diagnosis is well covered with reports from Switzerland, Hungary, Holland, and Belgium. A number of papers are devoted to biochemical aspects of amniotic fluid, and several papers deal with various facets of genetic counselling, including one on the relation between epidemiology and genetic counselling, and another dealing specifically with the problems posed by adoption. The final section contains a number of interesting and valuable papers on the haemoglobinopathies, including one from Hungary appropriately on haemoglobin J-Buda and G-Pest tests.

This is an unusually well-produced Proceedings issue containing many papers from Eastern European countries, but especially from Hungary. The editors must be congratulated.

K. M. LAURENCE

Clinics in Rheumatic Diseases, Vol. 3, No. 2. Immunogenetics and Rheumatic Disease

Edited by Derrick Brewerton. (Pp. vii + 309; Figures + Tables. £8.25.) London, Philadelphia, and Toronto: Saunders. 1977.

The major advances in clinical genetics in recent decades have largely concerned traits and diseases

dependent either on genes of major effect with simple patterns of Mendelian segregation, or on gross chromosomal abnormalities. Attempts to elucidate the genetics of more or less common disorders showing familial aggregation, but not explicable in simple Mendelian terms, have met with limited success, in spite of increasingly sophisticated techniques of analysis. Such analyses, and the conclusions derived from them, have not been of great clinical value and, more importantly, have not provided any clear guide to further research on aetiological mechanisms.

The discovery that genes in the HLA chromosomal region are of importance in determining susceptibility to a wide variety of conditions is therefore a landmark in clinical genetics. When, after the pioneer experimental work in mice, possible disease associations with the HLA system were sought, it was the lymphomas and leukaemias that were first investigated. However, the most clear-cut and striking associations have been found in other clinical fields, and in none more than in some of the rheumatic disorders.

In this volume, Derrick Brewerton has brought together a group of contributors to document progress in this field. Two excellent introductory chapters supply a background. Ekkehard Albert presents a clear account of the immunogenetics of the HLA system, and of the way phenotypic data can be analysed to provide gene and haplotype frequencies. William Paul outlines present knowledge of the ways in which genes in the major histocompatibility region might influence the immune response. Though this has not proved of immediate relevance to the HLA associations with rheumatic diseases, it certainly provides ample scope for speculation about the possible modes of action of HLA-linked disease susceptibility genes. The genetics of complement deficiency is covered by Shaun Ruddy who critically discusses the relation of C2 deficiency to connective tissue disorders. In a further introductory section, Arne Svejgaard and his colleagues list the possible ways in which HLA-linked genes may determine increased susceptibility to disease, and it is an inevitable result of the format of the volume that much of this is repeated several times in different sections. A useful further introductory chapter might have provided a critical discussion of the problems presented by the genetics of the rheumatic disorders, and of how the HLA associations can be interpreted and applied to these problems.

Successive chapters deal with ankylosing spondylitis, the arthropathies of inflammatory bowel disease, Reiter's disease, psoriatic arthritis, and arthritis as a reaction to infection. This group of disorders form a fascinating interrelated clinical and genetic group, and the association with HLA B27 has initiated what promises to be a very fruitful period of further research.

The way in which the association with HLA B27 has contributed to a clearer understanding of different clinical patterns of the arthropathies is well illustrated in chapters on arthritis in children by Jane Schaller, and seronegative peripheral arthropathies in general by Stephen Milazzo. In both instances the results of HLA typing in combination with careful clinical assessment have helped to delineate what are probably different aetiological entities. Peter Statsny describes recent interesting work in relation to rheumatoid arthritis. How important HLA-linked genes will prove to be in the pathogenesis of rheumatoid arthritis and systemic lupus erythematosus, neither of which shows any great degree of familial aggregation, remains uncertain. The data documented suggest that the relative risk for rheumatoid arthritis in Dw4 positive individuals is of the order of 7. Future work, including appropriate family studies and the investigation of the possibility of heterogeneity within this disease, will be of great interest.

It is very likely that the diseases considered in this volume are the result of interaction between various environmental factors and genetic predisposition. Further elucidation of the genetics will surely go hand in hand with an intensive investigation of possible environmental factors, so that the disease processes thereby induced will be better understood and possibly controlled. All those interested in this group of conditions and in the genetics of common disorders will find much of value in this volume.

J. C. WOODROW

Immunology for the Practising Physician

Edited by Jon R. Schmidtke and Ronald M. Ferguson. (Pp. viii + 160; Figures + Tables. US \$23.40.) New York and London: Plenum Press. 1977.

This volume represents the proceedings of a symposium on the occasion of the dedication of the new Metropolitan Medical Centre in Minneapolis, Minnesota. Immunology was chosen as the topic of the symposium since, as the preface somewhat sweepingly quotes: 'immunology is where medicine's fundamental issues—the basic understanding of disease, its diagnosis, cause and cure—will be decided. For it is the immune system that dictates how we react to or resist disease'. The contents include current concepts in immunology, mechanisms of antigen recognition, the role of T cells, description of immune complex disease, the role of chronic viral infections, transplantation immunology, tumour immunology and immunotherapy, immune deficiency and malignancy, and immunological surveillance of cancer. There is also a chapter devoted to 'Genetic control of immune