Book Reviews

The Clinical Pathology of Infancy. Compiled and Edited by F. William Sunderman and F. William Sunderman, Jr. (Pp. xiv+565; illustrated+tables. $26.50.) Springfield, Illinois: Charles C. Thomas. 1967.

The term 'clinical pathology' in the title of this book is interpreted as being chemical pathology; morbid anatomy and bacteriology and virology are not included. It is a striking comment on the changing relative incidence of disease in infancy that a multi-author book such as this one should appear largely devoted to the clinical pathology of genetically determined diseases.

The book is in four parts. The first 14 chapters, Part I, are on inborn metabolic errors: dysproteinaemias, red cell enzyme defects, serum enzyme defects, the infantile lipidoses, the mucopolysaccharidoses, defects of glycogen metabolism, defects of blood coagulation, and defects of amino acid metabolism. The latter are covered in detail in 5 chapters. Part II is on endocrinological disorders of infancy. Part III is on erythroblastosis foetalis, and also on normal values of substances in blood and urine and microtechniques for their estimation. Part IV is a short section of cytogenetics.

Over-all, the contributions are of high standard, but somewhat uneven and somewhat inconsistent in the amount of detail given on laboratory methods. The lipidoses and the errors of amino acid metabolism are fully covered, and methods of investigation are well described and illustrated. The various mucopolysaccharidoses are not separately considered and only a description of a screening method of estimating total acid mucopolysaccharides is given, whereas it is the differentiation of, for example, chondroitin sulphate B and heparitin sulphate which is of clinical importance. The errors of glycogen metabolism and of blood coagulation are fully described, but no details of methods of investigation are given. Errors of sugar metabolism are not described, but a full account is given of methods of identifying sugars in the urine of infants by paper chromatography and thin layer chromatography. There is little description of cystic fibrosis of the pancreas, but a full account is given of the diagnosis of the disease by the estimation of sweat electrolyte levels. Presumably, by a curious lapse of memory, this condition is said to be transmitted as a Mendelian recessive trait in one chapter (correctly), and to be transmitted as a Mendelian dominant in the next chapter.

Both chemical pathologists and paediatric registrars will read this book with profit as a supplementary text to standard works of paediatrics and chemical pathology.

C. O. CARTER

The Placenta in Twin Pregnancy. By S. J. Strong and G. Corney. (Pp. xvi+134; illustrated+tables. 105s.) Oxford, London, Edinburgh, New York, Toronto, Sydney, Paris, Braunschweig: Pergamon Press. 1967.

As Professor Chassar Moir points out in his foreword, 'it is a curious fact that a happening so remarkable as the occurrence of a twin pregnancy should hitherto have attracted but little serious attention from obstetricians ?'. This book helps to close the gap in our knowledge. The opening chapter is devoted to an historical description of the placenta in twins. William Smellie (1751) observed the possible communication between the placentae of twins, but in fact van der Weil (1687) was the first to give a description of the vascular anastomoses between the placentae.

All aspects of the twin placenta are then considered including development, frequency of turning, and the various methods at present available for examining the placenta. This latter chapter includes a very complete consideration of the twin transfusion syndrome. Final chapters are devoted to the vascular communication in both the monochorial and dichorial placentae.

Throughout this book there is a liberal use of illustrations and of photographs, many of which are in colour. This is the essential reason why its 134 pages cost 105 shillings. The care shown in the preparation of this excellent study is demonstrated by the very full bibliography which includes 674 references.

This book, devoted as it is to the placenta, inevitably considers only this side of the foetus-placental unit. It is to be questioned whether such a division is desirable though a very great deal has been achieved within the limits imposed. Frequently there is a feeling that only half the story has been told. It is a pity, therefore, that the authors were not encouraged to be bold and to undertake a comprehensive review of all the problems related to twins, at least during pregnancy and the neonatal period. Such a study is needed very much indeed. Inevitably this would also produce a much larger book but one which would be of enormous interest to both obstetricians and paediatricians, as well as to placentologists and placentarians.

N. MORRIS

Karyotyp and Phänotyp der autosomalen Chromosomenarberrationen beim Menschen. By Rudolf Arthur Pfeiffer. (Pp. x+295; 51 figures+23 tables. DM.84.) Stuttgart: Gustav Fischer Verlag. 1968.

This survey of human autosomal abnormalities, by an

active investigator in the field, will undoubtedly be welcomed by German-speaking cytogeneticists. For any one whose German is less than fluent, however, the book is likely to prove tough going. The print is crowded, there are numerous abbreviations and the organization of the material into chapters and subchapters does not always appear to be logical. Nevertheless, the effort is worth making, because the author's emphasis on the clinical manifestations of abnormal chromosome constitutions is a topic that will undoubtedly become increasingly important; and much pertinent data have been abstracted from the literature up to the end of 1965.

The book is divided into three parts. The first deals with the human karyotype and includes descriptions of the techniques used in its analysis.

The second, and by far the longest, section bears the heading 'The Phenotype'. The first abnormality to be considered is trisomy D(13–15). Eight patients observed by the author himself are described and data on more than 30 reported cases are summarized. In addition, 4 cases are described which showed some of the abnormalities of trisomy (13–15), but which did not have this particular type of chromosomal abnormality. This is followed by considerations of mosaicism, duplications and deficiencies, double aneuploidy, and translocations involving the large acrocentric chromosomes. The second chapter in this part of the book deals with trisomy 18; the arrangement of the material is similar to that on trisomy (13–15). The next chapter deals with aberrations of other autosomes which, with the possible exception of the 'cri-du-chat' syndrome, cannot so far be associated with definite clinical entities. The last chapter in this section is devoted to the cytogenetics and clinical description of mongolism.

The last part of the book deals with the possible relation between chromosomal aberrations and their phenotypic manifestation. The author's view is entirely orthodox. 'It is not the visible change in the karyotype, but the resultant change in the genotype which causes the phenotypic effect' (p. 229, reviewer's translation). There is, of course, little genetic evidence for this assumption, and so the ever-ready hypothesis of 'genic balance' has to be invoked.

Now that the major chromosomal abnormalities in man have been delineated, the discovery of their causal relation to pathogenesis provides a new challenge to cytogeneticists. The merit of the present book is that it contains a large amount of data which provide a necessary basis for this type of analysis.

URSULA MITTWOCH

A Comparative Osteological Study of the Ainu and the Australian Aborigines. By Bin Yamaguchi. Australian Institute of Aboriginal Studies Occasional Papers No. 10. Human Biology Series No. 2. (Pp. 75; 9 figures + 50 tables.) Canberra: Australian Institute of Aboriginal Studies. 1967.

The racial origin of the Australian Aborigines has been debated for nearly a hundred years. Some investigators have suggested from physical data as well as language studies that the Aborigines are practically uniuniformly homogeneous throughout the whole continent, while others have found somatological evidence to suggest three major phases of immigration from Asia: (1) the Tasmanoid, a branch of Oceanic Negrito as the first wave; (2) the Murrayian, an archaic Caucasoid people who were considered to be related to the Ainu (a remnant of a group with a Neolithic culture in Japan); and (3) the Carpentarian type of Northern Australia, possibly related to aboriginal peoples in India and Ceylon, as the final major migration.

Professor Yamaguchi has compared 13 measurements, 11 indices, and 18 non-metrical cranial characteristics from 426 Aboriginal, 263 Ainu, 107 Jomon (another primitive group in Japan), and 258 modern Japanese crania. In a smaller collection of post-cranial skeletons 19 measurements and 8 indices were compared. Some Aboriginal crania showed characteristics defined as Australoid, such as a narrow cranial vault, protruding superciliary arches, and marked prognathism, while in others these characteristics were weak or the vault was well expanded, as in some of the prehistoric Ainu skulls of Japan. The latter type was most frequently seen in the Murray basin area of South Australia. However, most of the Aboriginal skulls were found to show a normal frequency distribution in structure between the two extremes and to be homogeneously distributed geographically throughout the whole continent.

Penrose's size and shape distance formulae were used to indicate that the Ainu, Jomon, and Japanese skeletons make a distinct cluster almost equidistant from the Aborigines. Distance analyses were also made of published cranial measurements from other Asiatic and Oceanic populations. These revealed four primary, almost equidistant, population clusters: (1) Ainu, Jomon, and Maori, being rather closer to (2) Japanese and Dayak, than the other groups, (3) Hindu, the primitive Veddahs of Ceylon, and the Dravidian-speaking proto-Australoid peoples of India and (4) the Australian Aborigines, including the Murray basin group and Melanesians from New Britain and New Caledonia. A fifth group, the Tasmanians, were equally isolated from the other groups. There were, however, traces of clustering of a few characteristics of the less Australoid Aboriginal and earlier Ainu skulls and of Aboriginal and Jomon postcranial skeletons. This may indicate contact between these groups at the Upper Palaeolithic or Mesolithic stage of their development rather than later on at the Neolithic stage as had previously been suggested. This study indicates that the Australian Aborigines must have been completely isolated from neighbouring populations for a long period.

The statistical analyses are thorough to the extent that some associations are tested by two different statistical procedures. This monograph is an important contribution to the palaeo-anthropology of Eastern Asia and Oceania.

J. G. PARISH