

Concluding remarks

Patterns of respiratory virus infection

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THE purpose of this issue is to bring to the attention of a wide audience the results of an extensive study in Britain of the causes and of the clinical and epidemiological features of acute respiratory tract infections in patients in general practice and in children admitted to hospital. The study took place over 2 years in twenty-seven centres and over 4000 patients were investigated; the virological work was done in laboratories mainly in the Public Health Laboratory Service. Collaborative studies of this sort are difficult to launch and keep running at a uniformly high standard but most of these difficulties were overcome and the data checked and analysed in great detail by epidemiologists at the Central Public Health Laboratory, Colindale.

Considerable trouble was taken to agree on defined and uniform methods for the selection of cases, and for observing and recording the clinical findings. Laboratory methods were easier to standardize but because of the small numbers and the inevitable technical variations it is not possible to say that there were real differences in the nature of the viruses and the diseases they caused in different parts of the country. On the other hand, in the pooled results some of the individual and local differences were probably averaged out and it was possible to analyze the pattern of symptoms and signs in patients grouped according to diagnosis. The classification of cases into categories was largely according to the area of respiratory tract in which most of the signs and symptoms were found; if several areas were equally involved the lowest level was taken. This method of classification worked quite well. Data on the symptoms and diagnosis were also tabulated for patients grouped by the viruses recovered. These showed in greater detail facts ascertained from earlier studies abroad and in this country; for example, that respiratory syncytial virus causes much of the serious disease, namely bronchiolitis and pneumonia, seen in children in the first year of life, and that parainfluenza viruses are the main causes of croup. Other viruses were found in diseases that affected a wider area.

Although some subjects without respiratory disease – controls – were also tested, and although

many fewer viruses were found in them than in the cases, this study does not give us much new evidence that the viruses cause the diseases observed, although as in most studies of this sort, viruses or haemolytic streptococci were isolated from only a minority of patients – a quarter to a third. This may have been because, particularly in the general practice study, rhinoviruses were not looked for with all the techniques now available, and that the coronaviruses, which were unknown at the time of the study, were not tested for at all. It is also likely that a number of patients though infected with known agents were not shedding the virus at the time they were swabbed. Serological studies to detect these infections were outside the scope of these studies and would probably not have been possible because the patients or their parents would not have co-operated. When all this has been said it is still possible that some of the cases were due to as yet unrecognized and uncultivated viruses and the search for these should continue, though not by means of a study of this sort. There remains also the vexed question of what role is played by bacteria other than streptococci, and more work is clearly needed on this subject.

There was disappointment that some of the aims of the studies were not achieved. For example, it was not possible to work out the frequency of minor disease in the communities from which the children admitted to hospital were drawn, and of course this type of study never reveals how many illnesses occur that are not seen by a doctor. Nevertheless, the study is based on a fairly representative sample of the types of case confronting the general practitioner and paediatrician. There was also disappointment that the criteria for selection of cases and the standards of clinical observation were not uniform in all areas, and this seems to be an inevitable drawback of such multi-centred investigations. It does not invalidate the results, but decreases their precision. It may be better to limit future studies to a few centres if it is desired to make more detailed analyses of clinical aspects of these diseases, possibly with the object of finding simple criteria which would indicate with reasonable probability the nature of the virus infecting some patients.

The results of this study for many collaborators and readers will certainly be an increased interest in and understanding of those illnesses which cause such a large proportion of their work. If an effective means of treatment emerges, perhaps only for certain virus infections, then it may be possible to apply

some of this knowledge for the more effective management of patients. In any case, this study should have an honourable place in the history of the assessment of the role of viruses in acute infections of the upper and lower respiratory tract.

Books reviews

Recent Advances in Cardiology

Edited by JOHN HAMER. Pp. 424, illustrated. Sixth edition. Edinburgh and London: Churchill Livingstone, 1973. £5.50.

This is the sixth edition of a book which first appeared in 1929 and this in itself is a tribute to both the quality of previous editions and to the continuing advances being made in this field. It is a predominantly British production since all but one of the twelve contributors are based in this country. As the editor points out, there have been dramatic changes in both medical and surgical aspects of cardiology in recent years, many of which have not yet found adequate representation in current text books. It is intended, therefore, as a practical guide for postgraduate students and physicians and in this it has been eminently successful.

There are three major sections of which the first is concerned with practical clinical problems and includes chapters on paediatric cardiology, pulmonary embolism and coronary care. The second group of chapters is concerned with recent advances in myocardial metabolism and biochemistry and there is an interesting chapter on the new tool of echocardiography. The last section is concerned with advances in treatment and quite rightly includes a major section on the beta adrenergic blocking drugs and chapters on the place of electroversion, pacing, and valve replacement.

The book is pleasing in its format and adequately, although not profusely, illustrated. It is reasonably priced and it is commended to the postgraduate student as an invaluable adjunct to the standard textbooks in this field.

A Colour atlas of Renal Diseases—Wolfe Medical Atlases—5

By GEORGE WILLIAMS. Pp. 240, illustrated. London: Wolf Medical Books, 1973. £4.00.

This book is intended mainly for undergraduates, who, as the author states in his introduction, 'often find renal diseases confusing and hard to understand'. This is all too true—for more senior students of nephrology as well. Unhappily, Dr Williams' publication is not likely to make the going easier for any of us.

The right-hand pages carry non-glossy colour plates, mostly 5·2 by 7·8 cm in dimension, of gross and microscopic renal pathology. The left-hand pages consist of equivalent 'boxes' containing a brief description of the appearances and a good deal of spare space. The chapter headings cover renal diseases, both medical and surgical, fairly comprehensively, but the brief introductions at the beginning of each are inadequate and sometimes frankly misleading. There are a number of electron micrographs, some immunofluorescent pictures, a few radiographs and even one photo of a patient. However, for a book that bears renal diseases and not renal pathology in the title there is far too little clinico-pathological correlation. A second edition with larger plates and more clinical detail related to the illustrated abnormalities would be more acceptable. However, there is a limit to what can be learnt from largely post mortem renal pathology and one is left wondering whether the concept behind this sort of book is not somewhat dated.

Clinical aspects of Thromboembolism

By W. R. PITNEY. Pp. 194, illustrated. Edinburgh and London: Churchill Livingstone, 1972. £3.00.

In this slim volume there is a wealth of useful information ranging from aspects of the etiology and diagnosis of deep venous thrombosis to practical therapeutic advice. A most helpful section is that on therapeutic defibrination, including adequate discussions on the laboratory control of the various forms of anticoagulant and thrombolytic therapy. It is an interesting commentary on the change in practice over recent years that the section on anticoagulant therapy in myocardial infarction occupies less than two pages of text due, as the author points out, to the fact that controversy still surrounds it. He gives authoritative advice on the indications and contra-indications to thrombolytic therapy, and in discussing oral anticoagulants indicates the possible complications that may occur due to toxic reactions to the drug as well as to excessive prolongation of the prothrombin time.

There is a commendable absence of preaching in this book, which could be read to advantage by all called upon to deal with thromboembolic disorders.

Radiological Diagnosis of Digestive Tract Disorders in the Newborn. A guide for radiologists, surgeons and paediatricians

By B. J. CREMIN, S. CYWES and J. H. LOUW. Pp. 146, illustrated. London: Butterworths, 1973. £5.80.

Newborn infants provide many difficulties in diagnosis due in part to the relative rarity of the conditions which affect them. The congenital anomalies of the gastrointestinal tract give rise to much anxiety in the attendant physicians and yet are perhaps the most amenable to surgical correction. The increasing standards of clinical diagnosis and treatment have not universally been matched by improvements in diagnostic techniques and the appearance of this book is particularly timely in this respect.

The authors are a triumvirate of two surgeons and a radiologist from the Red Cross War Memorial Children's Hospital in Cape Town and one of their stated tenets is that both clinical and radiological data must be complementary if early and accurate diagnosis is to be achieved. This is not, therefore, a book written for a single speciality but it has been designed as a guide for those collectively involved in neonatal management.

The book comprises six sections arranged in logical sequence to deal with the anomalies of the oesophagus at the beginning to ano-rectal malformations at the end. It is well illustrated with reproductions of radiographs and, where appropriate, these are illuminated by line drawings to aid interpretation and illustrate the variations that may occur in particular congenital anomalies.

The text is concise and contains practical advice on the radiographic techniques required. Although the authors admit that some of the studies advocated are available only in large paediatric hospitals, this is surely a laudable approach which must ultimately have a desirable effect on standards of neonatal care. There would, for example, be little excuse