Book reviews


This book reports the proceedings of the second international conference on coeliac disease held in Holland in March 1974. It highlights the enormous amount of work going on in this field and provides an up-to-date account of research in coeliac disease from many countries. The book is well produced with many illustrations. After most papers there is a useful and very readable summary of the discussions which ensued.

A definition of coeliac disease in both childhood and adult life is provided at the onset. Visakorpi defined coeliac disease in childhood as being based upon three criteria, namely (1) structurally abnormal jejunal mucosa on a gluten-containing diet; (2) clear improvement of villous structure on a gluten-free diet; (3) deterioration of mucosa during challenge. Though he states that it is not always necessary to fulfil these criteria in clinical practice, this kind of definition based upon morphological criteria is the only satisfactory basis for a definition at present as there is no single diagnostic test for coeliac disease.

Booth defined coeliac disease in adult life in similar terms and emphasized that this is a lifelong disorder, but he pointed out that though a complete return to normality by the small intestinal mucosa is usual in children with coeliac disease on a gluten-free diet, some patients may only show partial response to such dietary elimination, the enterocyte becoming normal but villous structure remaining abnormal. He also described a group of patients who do not fulfill these criteria, who, despite a flat jejunal mucosa, do not respond to a gluten-free diet. He believes that these adult patients have a variant of coeliac disease which has become irreversible.

A great deal of this book is devoted to work concerning the fundamental aetiology of coeliac disease which is still uncertain. Further studies are reported of the chemistry of gliadin. There is now good evidence that a-gliadin has a greater number of toxic determinants than do other gliadins, but the precise indentification of the toxic fraction of gliadin awaits elucidation.

One of the most interesting and exciting developments in this field has been the development by Trier and his colleagues of a simple and effective technique for small intestinal organ culture of biopsy specimens. The use of this technique with biopsies from children is reported by Jos and his colleagues, and its use in adults by Falchuk and his group who have in this way investigated the pathogenesis of coeliac disease. They have reported evidence that gluten-peptides are not directly toxic to the epithelial cells in coeliac disease, but there must first be activation of an endogenous effector system which they believe to be the local immunological system in the small intestinal mucosa.

A detailed account of the histocompatibility HL-A system is given in this book which is not readily available elsewhere. A major finding in this field has been the observation that HL-A 8 antigen is found with increased frequency in both adults and children with coeliac disease. It appears that possession of the HL-A 8 antigen predisposes to the development of coeliac disease. McNeish and his colleagues point out that the timing of the first gluten feeding and the subsequent amount of dietary wheat may be important threshold factors in precipitating clinical disease. They also report the interesting observation that nearly all countries in which coeliac disease has been reported have a yearly wheat intake per head greater than 100 kg and also a high gene frequency for HL-A 8.

This book also reports the various animal models that have been used to produce experimental villous atrophy. Ferguson, using rats infested with Nippostrongylus brasiliensis, reports evidence that development of mucosal damage in these rats is thymus dependent.

Recent work concerning genetics and epidemiology is also reported from the West of Ireland and Birmingham, and there is a section on the evolution of our knowledge concerning the clinical aspects of coeliac disease.

This book shows that a great deal of original work is going on in many centres concerning coeliac disease in adults and children, but what remains clear after reading the book is that uncertainty still exists as to whether the basis of coeliac disease is an enzymatic deficiency or some kind of immunological defect, though the reader is left with the impression that the latter is more probable.


It has been a pleasure to review this book. Firstly, the contributors have great experience in the detection and handling of the conditions they describe; secondly, they have not confined themselves to treatment but have included authoritative information about the causation and clinical presentation of the 8 disorders described. These are phenylketonurias, homocystinuria, maple syrup urine disease, the galactosaemias, hereditary fructose intolerance and fructose 1:6 diphosphatase deficiency, Wilson's disease, and the organic acidaemias.

The preface by Dr. Raine provides a thoughtful intro-
duction, though one wishes he had discussed the philosophy and broad approach to treatment more fully. He also contributes two chapters, both somewhat speculative: one on treatment by inhibition of renal tubular reabsorption, which certainly has little place in homocystinuria or in hyperprolinaemia indeed, which has yet to be proven as a pathological situation; the other on new and experimental approaches to treatment outlines the several differing and exciting ways in which this is being done.

It should be pointed out that nowhere in the book is there any discussion of the effect on the family of prolonged dietary restriction and the possible ways of meeting the problems that arise. This is a suggestion for the second edition!

In the chapter on phenylketonuria the focus is on diet and the results of dietary treatment; unfortunately there is no discussion on diagnosis or pathogenesis, including the possible effect of a reduction in available tyrosine. There is considerable information about the calorie, mineral, and amino acid needs of young children with one small omission, the need to add calcium to the diet of children on Cymogran.

Professor B. Clayton emphasizes the need for children suffering from inherited metabolic disease to be treated in centres with good facilities and experience, and in his preface Dr. Raine points out that 'success comes more from careful and constant attention to management'. In this context it is hoped that the physician armed with this excellent book will not assume that treatment is easy and so accept full responsibility for the occasional case that comes his way. This should remain a shared exercise with the experienced central unit, which will require at least one copy of this book for use in its clinical, dietetic, and biochemical areas.


This book records the proceedings of a conference held in 1973 sponsored by the International Organization for the Study of Human Development and Nestle Alimentana. It contains 20 papers dealing with different aspects of milk and lactation. There is one paper on the embryology of the mammary gland, there are four papers on various endocrine aspects of lactation.

The three papers concerned with the composition of milk deal with the incorporation of dietary fat into milk triglycerides, the structure of different caseins, and immune defence factors in human milk. There are four articles on the digestion of lactose, two dealing thoroughly with the problem of primary adult lactose intolerance, and one on the lactose intolerance of the Californian sea lion. There is one paper on the absorption of peptides. Four papers deal with the social and cultural aspects of breast feeding and there are two papers from the milk manufacturers, one of which deals with the methods used to modify cow's milk so that it resembles human milk.

This volume deals with a wide variety of topics and there is much in it to interest and inform the paediatrician who is concerned with infant feeding and nutrition. It is, however, very expensive, and this will deter many from buying a copy.

**Phototherapy in the Newborn: An Overview.**

This book consists of 12 papers selected from a symposium on phototherapy held in February 1973 in Washington, D.C. The scope ranges from detailed physical assessment of the radiometry of phototherapy, through a discussion of photo-oxidation products to the possible damaging effects of phototherapy. Much of the information has been obtained from the Gunn rat and the later papers are of considerable clinical interest. Some of the important points that emerge are that photo-therapy increases the amount of unconjugated bilirubin secreted into the bile in both the rat and the human and this appears to be the main pathway of lowering plasma bilirubin, and also that the various breakdown products described do not appear either to be directly toxic or to compete with bilirubin for albumin binding. It is a sad reflection that after so many years of phototherapy there is no suitable instrument for measuring this form of treatment accurately and assessing its physiological effect.

Dr. Gerard Odell discusses the various methods of assessing toxicity to bilirubin in the serum and still is unable to point to any one effective method. Drs. Lois Johnson and Thomas Boggs claim to show bilirubin brain damage at plasma bilirubin levels of 15 mg/100 ml and over in a significant number of cases if this has been present for more than 8 hours. This has serious implications from the practical point of view in the ordinary neonatal nursery and one would view these results with reservation.

There are other papers on the immediate and long-term effects of phototherapy on preterm infants, the effect of light on man and on his circadian rhythms, and all of them show that there is unlikely to be serious ill effect when phototherapy is used for a few days only. A very short paper by Dr. Marshall Klaus brings the reader back to earth in raising the question of the mother and her reaction to blue lights, separation from the infant, and eye patching. All these, he asserts, may have adverse effects on primary mother/infant attachments with later implications for adequate mothering feelings and possible baby battering.

This paperback contains a considerable amount of information which will be helpful to the clinician dealing with jaundiced newborn infants; it should settle many an argument between colleagues around the incubator.