competitor for albumin binding and hence this very useful drug has escaped a threat to its use. It was agreed that haemolytic jaundice is more dangerous than nonhaemolytic, but no reason was given. In a study concerning bilirubin binding and free fatty acids (FFA), Drs. Gartner and Kwang Sun Lee, showed that FFA concentrations in the plasma reduced bilirubin levels in the plasma possibly by competitive inhibition of bilirubin binding to albumin. As plasma FFA is increased in most stress conditions and particularly starvation, it may be an important shuttle between albumin and the cells which could have implications regarding the distribution of bilirubin between neural and non-neural tissue.

There is a great deal of solid meat in this volume, it is easy to read and ends with three important summarizing papers by Drs. Thomas Sisson, Leo Stern, and Alex Russell. Anyone concerned in this field would be well advised to have a copy.

B. S. B. WOOD

Practical Pediatric Electrocardiography.

Edited by L. C. HARRIS. (Pp. v+125; illustrated+tables. US \$9.00.) Galveston: University of Texas Medical Branch. 1976.

This book is produced with students, junior medical staff, nurses, and paramedical personnel specifically in mind. It does not attempt to deal with rarities, and starts at the very beginning. Nevertheless, having completed the book, the reader should be able to cope with 95% of all paediatric electrocardiograms, and be able to extract 90% of the information contained in them. Most of the remaining 10% of information could have been obtained had there been instruction on the drawing of derived vector loops from the spatial electrocardiogram. This could have been achieved with only slight expansion of the section on mean qrs loop.

Each section consists of an appropriately dogmatic statement of principles, followed by test multiple choice questions. There is a final revision examination. Laudable attempts are made to relate the ECG to actual clinical problems, but the general level of expertise consequently drops. For example, it is stated that a 2-month-old infant with heart failure due to a VSD requires banding of the pulmonary artery or correction of the defect without delay if not promptly improved by digitalis or diuretics. This advice takes account of neither the natural history of VSD nor of the overall results of banding

and debanding. Total correction, yes, but not unless there is failure of an intensive trial of medical treatment, and the VSD is not of the 'Swiss-cheese' type.

Many readers will not understand why the ECG on page 57 is interpreted as showing biventricular hypertrophy, since it is, by the authors stated criteria, normal. Apart from this the level of consistency is excellent. Many general paediatricians would find cardiology much easier if they could read ECGs confidently. This book will be of great value to both students and doctors including (dare I say it?) consultant paediatricians.

FERGUS J. MACARTNEY

The Child with Congenital Heart Disease after Surgery. Edited by B. S. LANGFORD KIDD and RICHARD D. ROWE. (Pp. xii+466; illustrated+tables. £19.20.) Bristol: Wright. 1976.

This book contains the proceedings of an international symposium held in Toronto in June 1975. It is an elegant volume, conventionally printed with commendable speed, bearing few marks of hasty production. As an up-to-date picture of advances in the surgery of congenital heart disease, it is excellent and comprehensive, with the chapters on primitive ventricle, transposition, infant tetralogy, tricuspid atresia, and pulmonary atresia with ventricular septal defect being outstanding. However, all the information given in these areas is readily available elsewhere.

The reader who infers from the title that the participants devoted themselves to the long-term fate of surgical survivors may be disappointed. Though the 'home team' strove manfully to keep to their presumed brief, not all were so single-minded. In particular there was reluctance to mention either the early or late results of surgery for pulmonary atresia with intact ventricular septum, so that the benefits of surgical intervention here remain uncertain. However, there are valuable chapters on persistent hypertension following coarctation resection, conduction disturbances after repair of tetralogy, pre- and postoperative right and left ventricular volumes in various conditions, and growth, development, intelligence, and rehabilitation in survivors of cardiac surgery. Perhaps the most important paper on long-term results was that from the Mayo Clinic on the fate of raised pulmonary vascular resistance after surgery in patients with ventricular septal defect, showing that this fell to normal or

almost normal in all patients whose VSD was closed in the first 2 years of life while remaining on average unchanged in patients operated on later. Because such detailed information is not published elsewhere, this chapter is bound to become a source reference, as is one by Van Praagh *et al.* on pulmonary atresia. The latter would on its own justify purchase of the entire book, even if it has, of all chapters, the least to do with 'The Child after Surgery'.

FERGUS J. MACARTNEY

Cystic Fibrosis. Manual of Diagnosis and Management. By CHARLOTTE M. ANDERSON and MARY C. GOODCHILD. (Pp. 174; illustrated+tables. £4.75.) Oxford: Blackwell Scientific Publications. 1976.

This small volume presents a comprehensive review of cystic fibrosis. The initial brief general description is followed by a chapter on the pathogenesis. The final chapter summarizes the lines of investigation which have been followed over the past 30 years. Intermediate chapters give clear and concise descriptions of the clinical presentation at various ages. The more common practices in the management of the respiratory and nutritional problems are presented in detail, the authors giving reasons for the choice of therapy. Tables of commonly used drugs and pancreatic preparations are included, and the positions assumed by the patient during chest physiotherapy are illustrated by line drawings. Practical details of the more controversial treatments such as antibiotic aerosols, mist tents, and artificial diets are given. The other aspects of the disease—psychological, social, genetic, and educational, are stressed. Finally, there is a discussion on survival rates and the place of newborn screening. Each chapter includes a list of illustrative articles, detailed reviews, or chapters to be found in textbooks. The book is well produced and the standard of the reproductions of chest radiographs and histological sections is excellent.

This volume can be recommended as a reference book on cystic fibrosis. The chapters on medical management are perhaps too detailed for a book of this type written not only for doctors but to give information to others in many disciplines who have an interest in this condition. Few procedures or treatments reported in the literature are not mentioned, even tracheostomy and the use of positive pressure machines are given

in patients with ileal resections (Weber *et al.*, 1976). The EHC is broken due to defective ileal reabsorption of bile salts. It has been suggested that unhydrolysed dietary triglycerides (Tg) impair the reabsorption of bile salts in the terminal ileum, but no definitive studies have examined this hypothesis.

This investigation studied the effects of Tg on taurocholate (TC) absorption (as judged by both luminal and mucosal disappearance of TC) in the terminal ileum of the rat utilizing a well validated *in vivo* closed-loop technique. The test solutions contained triolein 10 or 30 mmol/l, TC 10 mmol/l, oleic acid 1 mmol/l, monoglyceride 0.5 mmol/l, were made isotonic (280 mOsm/l) with sodium chloride, and were buffered to pH 7.1 with a sodium bicarbonate buffer; the control solution was identical except for the absence of triolein. Several paired experiments were performed using different absorptive periods up to 1 hour. Absorption of TC was linear up to 20 minutes, becoming curvilinear thereafter. Triolein had no effect on luminal or mucosal disappearance of TC at any of the absorptive periods tested. These results provide evidence that unhydrolysed Tg does not impair ileal reabsorption of bile salts. Further work is in progress to define the pathophysiology of bile salt malabsorption in CF.

Reference

- Weber, A. M., Roy, C. C., Chartrand, L., Lepage, G., Dufour, O. L., Morin, C. L., and Lasalle, R. (1976). Relationship between bile acid malabsorption and pancreatic insufficiency in cystic fibrosis. *Gut*, 17, 295-299.

Glucose stimulates fructose absorption: clinical implications in health and disease. P. J. Milla, D. P. R. Muller, and J. T. Harries. Institute of Child Health and The Hospital for Sick Children, Great Ormond Street, London WC1.

The disaccharide sucrose is composed of the two monosaccharides glucose and fructose, and the increasing dietary consumption of sucrose in the developed parts of the world has resulted in fructose becoming a major dietary constituent. Despite this there have been no systematic studies on the effects of glucose on fructose absorption. This study was prompted by our clinical impression that some infants with protracted diarrhoea absorb mixtures of glucose and fructose better than if either monosaccharide is presented alone.

The effects of glucose on fructose absorption have been investigated in the rat jejunum *in vivo*, using a steady-state perfusion technique. In addition, effects on fluid and electrolyte transport, and transmural potential difference (TPD), were simultaneously studied. Perfusion of mixtures of fructose (20 mmol/l) and glucose (2 mmol/l) resulted in a significant ($P < 0.001$) stimulation of net fructose transport, compared with values obtained when fructose was perfused alone. Higher concentrations of glucose (56 mmol/l) also stimulated fructose absorption but this was not statistically significant. The glucose-containing solutions induced large changes in TPD; when perfused alone fructose induced a small but significant increase in TPD. Perfusion of mixtures of fructose (20 mmol/l) and 3-*o*-methylglucose (2 mmol/l and 56 mmol/l) abolished the stimulation of net fructose transport. 3-*o*-methylglucose induced changes in TPD identical with glucose in equimolar concentrations. These results suggest that the stimulation of net fructose transport by glucose (2 mmol/l) may be related to cellular metabolism.

These studies indicate that glucose stimulates fructose absorption and may have important implications with regard to the dietary content of sucrose in health, and to the dietary management of diarrhoeal states in infancy.

Correction. In the April issue a review appeared on p. 340 of *The Child with Congenital Heart Disease after Surgery*. The publisher is Futura, Mt. Kisco, New York. The UK distributor is Wright, Bristol.