

on the outer surface of platelets. In any event, the presence of carbonic anhydrase on vascular cells as well as cells in the circulating blood provides a mechanism by which a high extracellular bicarbonate concentration could cause intracellular acidification in tissues with a rich capillary supply, such as the heart. This possibility is supported by the finding that intravenous sodium bicarbonate uniformly raises blood lactate concentration in patients with congestive heart failure, whereas sodium chloride does not.<sup>17</sup> Increased lactate production by cardiac and/or skeletal muscle could be due to intracellular acidification, as could the reduced myocardial oxygen consumption and negative inotropic effects observed.<sup>17,18</sup> The usefulness of bicarbonate in lactic acidosis,<sup>19,20</sup> diabetic ketoacidosis,<sup>21,22</sup> and after cardiac arrest<sup>18,23</sup> has been questioned. These reservations seem particularly important for therapy during cardiorespiratory arrest, when elimination of carbon dioxide by the lung is no longer under physiological control. However, many authorities continue to advocate intravenous sodium bicarbonate for treatment of life-threatening acidemia,<sup>1,2,24,25</sup> and the latest recommendations of the Resuscitation Council (UK) for prolonged resuscitation include "repeated doses of adrenaline and sodium bicarbonate" (50 mmol sodium bicarbonate intravenously every 5 min).<sup>26</sup> Our study reemphasises that extracellular pH does not predict intracellular pH, and adds to the evidence that intravenous bicarbonate therapy for patients with severe acidemia is both illogical and dangerous.

We thank Prof I. R. Cameron for invaluable advice.

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## BOOKSHELF

### Tomorrow's Doctors: The Path to Successful Practice in the 1990s

Benjamin H. Natelson. New York: Plenum. 1990. Pp 288. \$19.95. ISBN 0-306431955.

Medical practice is changing; the real professional world of doctors is not what it was when they entered medical school, and differs further from the private world of fantasy, speculation, and ignorance of medical school applicants. Benjamin Natelson has produced a survival guide for young doctors and medical students in the *terra incognita* of real medicine, for which medical school provided little preparation and no map. He stresses that medical school curricula overemphasise the "three Xs" (Dx, diagnosis; Px, prognosis; and Rx, treatment), producing "highly trained technicians", brimful of facts but unable to care for people. Implementing change is difficult: "Time, politics and a groundswell of student unrest will be required before the medical curriculum changes . . .", and since no single book can do that, he offers instead a guide to students and doctors on coping with the deficiencies of their training. Even if it is sometimes a little like Polonius' avuncular speech to Hamlet, a surfeit of excellent advice become cloying, the book should nonetheless be commended to those who do not find the professional satisfaction they had expected in medicine.

Natelson distinguishes *physicians*, concerned with the facts of medicine ("body plumbers") from *doctors*, who "put the facts into a human context that is meaningful to the patient". Physicians are characterised by the "three Bs", brash, boorish, and bullying, whereas the "three Cs", communication, caring, and creativity, convert physicians into complete doctors. The bulk of the book discusses "integrative medicine", arguing the importance of training for all medical practitioners in psychiatry, "physiatry" (rehabilitation medicine), and geriatrics, and considering such difficult patients as the "crocks". The principles acquired are then applied to the special problems of doctors themselves, "stress, money, sex and death".

Natelson writes well (and would have succeeded in his alternative career of journalism), and the book is easy to read. Despite its strong American flavour, emphasising private practice, it contains much of relevance to future medicine everywhere. If it was read widely we might see less of the

overworked doctor who is a "non-member of his own family because he is never at home; . . . a non-doctor because he doesn't have adequate time for his patients; and . . . a non-person because he doesn't have time for himself".

Academic Department of Psychiatry,  
St Mary's Hospital Medical School,  
London W2 1NY, UK

CHRIS MCMANUS

### The Mosaic of Autoimmunity

Y. Shoenfeld and D. Isenberg. Amsterdam: Elsevier. 1989. Pp 523. Dfl 125. ISBN 0-44811842.

It is a demanding task to produce a coherent survey of the mass of publications on autoimmunity. Shoenfeld and Isenberg have categorised the elements of research and offer these as mosaic pieces, which in many different arrangements form a gallery of autoimmune diseases. Inevitably, with our present knowledge, the results are more abstract than figurative. However, the authors have produced a scholarly and lucid review of current research into autoimmune diseases, placed in historical context. The book is referenced extensively and provides an advanced and well-organised entrée into the sphere of autoimmunity.

The authors have similar research interests and some of the fragments of the mosaic have sharper margins than others. There are some surprising omissions and the occasional error. An important element of the mosaic is the identification of the autoantigens recognised by autoantibodies in autoimmune diseases. Progress in this area has been greatly accelerated by the use of autoantibodies as probes of normal cellular function by molecular and cellular biologists. The results of these studies receive little attention in this monograph. There are sections describing natural autoantibodies, autoantibodies in healthy subjects, and the idiotype network but none on autoantibodies in disease. This may reflect the bias of Shoenfeld and Isenberg that idiotypes may be more important than antigen as a driving force in the production of autoantibodies. Their analysis of the role of selective IgA deficiency in autoimmunity is founded on the perception that IgA deficiency is primary. This is likely to be wrong in the great majority of cases. The data are most in accordance with the idea that IgA deficiency in systemic lupus erythematosus and related diseases is a secondary phenomenon that does not contribute to the pathogenesis of disease.

Despite these reservations, the book is a worthwhile addition to the published work. To the advanced student of autoimmune diseases it offers a stimulating synthesis, occasional exasperation, and a valuable collection of references. The uninitiated will find a broad review of the subject, but one that should be supplemented from other sources.

Royal Postgraduate Medical School,  
London W12 0HS, UK

MARK J. WALPORT

### Clinical Cytopathology and Aspiration Biopsy

Ibrahim Ramzy. Norwalk, Conn: Appleton and Lange. 1990. Pp 427. £99.50. ISBN 0-838512798.

Ten years ago cytopathology, apart from cervical screening, was a very minor subspecialty and the range of books was correspondingly limited. Now with every passing month new volumes come tumbling from the presses of the major

world publishing houses. Many of these are monographs on a particular organ or deal with only a specialised aspect of the subject such as fine-needle aspiration or cytotechnology. Good general-purpose books are still few and the early editions do not adequately cover modern developments. Professor Ramzy and five distinguished American contributors have produced an excellent new work which goes a long way towards providing the required comprehensive textbook.

The book is divided into four sections—Basic Principles of Cytopathology, Gynecologic Cytopathology, Nongynecologic Cytopathology, and Fine Needle Aspiration Biopsy. This imposed division seems unnecessary and is not entirely satisfactory—for example, fine-needle aspiration (FNA) of the liver and pancreas is covered in the chapter on the gastrointestinal tract in Nongynecologic Cytopathology, and FNA of the prostate appears with urine cytology in the same section. Conversely FNA of the ovary is not found under Gynecologic Cytopathology. There are other drawbacks, from my British viewpoint. The concept of dyskaryosis, which is the basis of the British terminology and classification of cervical smears, is not mentioned. An account of the cytological features seen in dysplasia, carcinoma-in-situ, microinvasive carcinoma, and frankly invasive squamous carcinoma exaggerates the accuracy with which histological findings can be predicted from cytological criteria. The American style classification of non-Hodgkin lymphoma is not generally applicable in British laboratories.

Nevertheless, I can warmly recommend this book to cytopathologists. The text is comprehensive and succinct with plentiful and useful tables and flow diagrams. The black-and-white photographs are numerous, very clear, and well chosen and the references are comprehensive. Ramzy states in his preface that he has tried to distil the available data into a concise format and to encompass all important aspects of the principles and practice of cytopathology as a discipline. He has succeeded.

Department of Pathology,  
Medical School,  
Birmingham B15 2TJ, UK

J. A. YOUNG

### Handbook on Paediatrics

Nicholas P. Mann and Angus Nicholl. Oxford: Blackwell Scientific Publications. 1989. Pp 356. £12.50. ISBN 0-632019670.

Dr Mann and Dr Nicoll try to fill a gap in the market between the paediatric vade-mecum and the textbook. Of necessity the style is rather personal, and I found myself disappointed from time to time with the opinions expressed.

They start with a nice explanation of the history and examination. There is a very good illustration of the correct position for holding a child for the examination of ears. In general the illustrations have been carefully chosen and are well presented. Tables are also provided, but it is disappointing to find a table on the investigation of poor weight gain/failure to thrive where the urine culture is last but one on the list, coming after jejunal biopsy. Few paediatricians would wish to give 0.18% saline in 4% dextrose in the initial management of hypernatraemic dehydration even at low flow rates. The recommended site for vaccination in an infant's thigh is too anterior and not on

the lateral aspect of the thigh. There are omissions: for instance, I was unable to find comments on the management of an infant where labour has been complicated by meconium-stained liquor or prolonged rupture of the membranes. This type of book must have a good index and regrettably I found some subjects difficult to look up: from the index it is impossible to find the recommended management for febrile convulsions.

I would not wish my junior staff to go out and practise paediatrics according to this manual alone and for that reason I hesitate to recommend its widespread use.

Royal United Hospital,  
Bath BA1 3NG, UK

JOHN P. OSBORNE

### Improving the Health of Older People: a World View

Edited by Robert L. Kane, J. Grimley Evans, and David McFadden. Oxford: Oxford University Press for the World Health Organisation. 1990. Pp 705. £50.00. ISBN 0-192617923.

"We have recently reached the point where the number of elderly persons in the developing countries exceed those in the developed world." Changing population structures and their likely effects on society in general and on health services in particular are a common preoccupation in many "developed" countries today. Clinicians, health and social service managers, politicians, and planners struggle to keep pace with rising demand in the face of limited resources. What we often fail to recognise is that these drastic changes in the age structure of our local populations form just a small part of a worldwide phenomenon. This book has the ambitious aim of providing us with that global context within which we can gain a fresh perspective of our own services.

As might be expected, under the WHO banner are ranked a formidable array of eminent contributors from all parts of the globe. Although of necessity some of the book is given up to an analysis of problems, it opens in an encouraging tone which is a continuing theme. 44 experts (out of 56 asked) gave their views on developments in biology, health care of the elderly, and social policies since the last similar report in 1974. The result was encouraging, showing considerable improvement in the past 16 years. (This may come as a surprise to those of us who are more concerned with fighting off the alligators than considering the beauties of the swamp.) A good review of demographic and social trends follows. The next major section concentrates on developments in specific areas. I found the contributions on prevention and treatment of osteoporosis and stroke particularly clear and up-to-date for a book of this nature (a sprinkling of references are as recent as 1988). The next section devotes over 200 pages to various models of providing health care for the elderly from different parts of the world. Geriatricians and others in the UK will find this very relevant, with the increasing emphasis on care in the community and the independent sector. There are also sections on education and personnel needs and on health and social policy issues.

The editors have succeeded in producing a book which, despite its global dimension, is immediately relevant to those working within their own national and local context. I strongly recommend it.

Lurgan Hospital,  
Lurgan, Co Armagh, UK

K. J. FULLERTON

### Child Development and Child Health

Martin Bax, Hilary Hart, and Susan Jenkins. Oxford: Blackwell Scientific. 1990. Pp 417. £18.95. ISBN 0-632020482.

For far too many years, doctors working in community child health have carried out ill-understood, unscientific physical and developmental checks at various "key" ages. In the UK, after the Hall and Butler reports on child health surveillance and with the imminent increase of general practitioner involvement, there has been a rekindling of interest in developmental paediatrics. Dr Bax and his co-authors describe the role of the community paediatrician.

The first part of their book is devoted to a description of normal child development and its variations, divided into easily digestible time periods—birth to six months, six to eighteen months, and eighteen months to school entry. This is made more interesting and relevant by the extensive incorporation of results from the authors' own longitudinal research on two groups of London preschool children. The chapter on physical growth and systems development includes a detailed description of prenatal and postnatal development of the cardiovascular, respiratory, gastrointestinal, and immune systems—a useful reminder to the reader that the study of child development is not limited to the nervous system. The inclusion of a description of Prechtl's behavioural states of infants, advice on how to set up the examination room and equipment, along with numerous clinical "tricks of the trade" and references to the new techniques of photorefractometry and gait analysis, make this a very practical and up-to-date guide on developmental assessment. Unfortunately, some of the clinical photographs in this part are of poor quality.

The latter part of the book has chapters on feeding and immunisation, developmental disorders, and common health and behaviour problems in the younger child. These are full of practical advice on management and include sections on non-organic failure to thrive, sudden infant death syndrome, child abuse, and common orthopaedic disorders. However, what makes this book unique and, I suspect, reflects the special interests of the authors are the superbly well referenced commentaries on social and environmental factors, on the use of services, and on the intimate relationship between health, development, and behaviour. These chapters include information on the effects on child health of social class, divorce, unemployment, smoking, and preconceptional nutrition as well as details on the provision of child care. Child health and development cannot be studied in the vacuum of individual developmental tests; it must be examined in the context of the family, society, and the environment. This is a textbook which provides that context.

Department of Child Health,  
Queen's Medical Centre,  
Nottingham NG7 2UH, UK

MITCH BLAIR

### New Editions

*Cardiac Problems in Pregnancy: Diagnosis and Management of Maternal and Fetal Disease.*—2nd ed. Edited by Uri Elkayam, Norbert Gleicher. New York: Alan R. Liss/Chichester: John Wiley. 1990. Pp 809. \$143/£98.50.

*Two-dimensional Echocardiography and Cardiac Doppler.*—2nd ed. Edited by Jay N. Schapiro, John G. Harold. Baltimore/London: Williams & Wilkins. 1990. Pp 670. £89.75.

*Neonatal Neurology.*—3rd ed. By Gerald M. Fenichel. New York/Edinburgh: Churchill Livingstone. 1990. Pp 261. £29.95.