

Medicine and Books

Managing the injured patient

Anaesthesia and Related Subjects in Orthopaedic Surgery. Ed David W Barron. (Pp 201; £12.) Blackwell Scientific Publications. 1982.

A group of anaesthetists working principally in an extremely busy specialist orthopaedic unit are attempting to impart their knowledge and experience to juniors in training and to those consultants who have been overtaken by recent advances in orthopaedic and traumatic surgery. The resulting book has many faults and shortcomings, some of which undoubtedly derive from the extreme difficulty of combining authorship with excessive work load, and some from the difficulty experts always have of appreciating the degree of ignorance of ordinary readers and their hunger for practical, preferably quantitative, advice. Many examples could be cited but two adjacent sentences illustrate the point. "The value of central venous pressure measurements during resuscitation is well known. Adequacy of renal perfusion can be observed by measuring hourly urine flows" (p 168). Both statements are true but give the reader minimal help in the practical management of the injured patient.

The book succeeds best where the author's practice is carefully described and the thinking behind each step detailed. Thus chapter 4, on spinal surgery, is readable and helpful. The more generalised approach adopted in chapters on scoliosis surgery and joint replacement leads to superficial muddled accounts. For example, the possible need for a special laryngoscope is mentioned under anaesthetic management of scoliosis but no further details are forthcoming under the heading "induction and intubation."

Although the book is beautifully bound and printed on expensive paper the format is traditional and takes little account of advances in communication skills. Why should anaesthetists have to work harder to absorb information than, for example, viewers of *Horizon* programmes? The jumble of statements on classification of scoliosis (p 14) could with advantage be replaced by graphics, as could the (very valuable) information in table 4.1 on blood pressure and blood loss during spondylotomy. The use of headings is erratic, ranging from omission (p 122) to the bizarre inclusion of mortality as a subheading under "Nerve lesions" (p 37). I also have a preference for x-ray films the right way up (figs 6.1 and 6.2).

Readers are exhorted to use many investigations during their pre-operative assessments but there are few indications of how the results will be used to alter management. This common medical malaise is epitomised by a sentence in the chapter on general considerations: "Routine blood gas analysis, haemoglobin and PCV estimations, blood urea and electrolyte measurements are carried out routinely." How can we plead for the extra money the National Health Service so sorely needs when scarce resources are squandered, however small a percentage of the total this wastage may be?

Blood loss and blood replacement feature in successive chapters: a more thorough treatment could be given and much repetition avoided by dealing with it separately. Estimation of haemoglobin and haematocrit is said to play an important part in assessing the adequacy of blood replacement during and

after operation, and more detail of how the authors use these measurements would have been welcome.

The value of thoroughness is brought out by the chapter on thromboembolism, which is excellent and repays careful reading. Anaesthetists and surgeons must combine their efforts towards a greater understanding of this complication. Improved management requires more exact tailoring of prophylaxis to individual patients and their particular operations. I would have hoped to see a recommendation for active reduction of high haematocrits.

The synopsis of paediatric anaesthesia is admirable, apart from the almost unbelievable omission of dantrolene from the management of malignant hyperthermia. As paediatrics is well covered in other texts, however, it would have been preferable to use the space to expand on topics such as "suitable scavenging" and Doppler ultrasound techniques for measuring children's arterial pressure. These subjects have not yet reached the pages of standard practical texts and the authors have missed an opportunity to provide much sought-after information. Chapters on particular techniques—local, regional, and neuroleptic—give unexceptionable views of their place in orthopaedic work.

The last three chapters are somewhat artificially separated off as a separate section: "Trauma and fractures." The attempt to compress the immediate care of so many categories of injured patient into one chapter is of doubtful value, and it is disconcerting to find different advice on how to immobilise cervical dislocations from that given in an earlier chapter by the same author. A chapter is devoted to fat embolism, despite previous description of the pulmonary embolic syndrome during hip replacement. This is undoubtedly a confusing subject whose overlap with disseminated intravascular coagulation has led to widespread disagreement over diagnosis and treatment. A brave effort to cover the topic flounders regrettably in the final section on treatment where "oxygen, digitalis, aminophylline, etc" are suggested. Heparin is referred to without any outline of dosage regimen or haematological control.

Regrettably, this is a very patchy book that will probably earn a place in large departmental libraries but, at £12, does not represent good value for individuals.

MARGARET L HEATH

Original approach to staining

Histochemistry: an Explanatory Outline of Histochemistry and Biophysical Staining. Richard W Horobin. (Pp 311; 77 figures; £29.) Gustav Fischer/Butterworths. 1982.

The terms histochemistry and biological staining are used synonymously by Dr Horobin, as he is concerned with the whole range of techniques that introduce colour or electron-scattering properties into biological material for microscopical examination. Intended to contribute to the scientific foundation

of the practice of histochemistry, the book is also perhaps a statement of the author's philosophy, which is original and sometimes controversial, as, for example, in the use of the term "H & E oversight stain."

The first chapter considers basic questions that are perhaps often overlooked: why do we want to stain; how do we stain; what is present to be stained; why does anything stain; why doesn't everything stain; why does the tissue remain stained; and what is the importance of staining or non-staining? After sketching some of the routes from live tissues and cells to stained preparations, Dr Horobin considers the important topics of fixation and other loss-limiting procedures. The need to protect most biological materials is exemplified by electron micrographs of fixed and unfixed tissue, the latter being devastated by the processing. Fixation is essentially the insolubilisation of proteins, and additionally for electron microscopy the insolubilisation of lipids, and the various agents used to achieve this and the various structural and chemical modifications this entails are discussed. These modifications are responsible for alterations in staining, resulting from factors such as exposure of previously inaccessible groups, introduction of new groups, changes in the porosity of the tissue, and the degree of swelling of molecular networks.

The following chapters are concerned with staining, repeatedly suggesting that biological staining is at least a two-phase process and cannot be understood as merely solution biochemistry or organic chemistry or. . . . The first of these chapters considers staining methods using dye, and two major integrating ideas are that staining is commonly due to dye-tissue affinities and that the patterns of staining often reflect rates of differential staining or destaining. There are explanations of the nature of dyes, the property of colour and related phenomena, and the concept of affinity, which concerns the factors that drive a dye from the bath onto the substrates of the tissue. Reactive staining methods, such as the periodic acid-Schiff technique, are more complex, since the reaction cannot occur until the reagents are within the substrate, incurring the problems of rate of uptake and affinity.

Enzyme histochemistry is particularly complicated, with the conflicting requirements of morphological preservation, insolubilisation of enzymes, and retention of the biochemical potency and specificity of enzymes, in addition to the problems of staining. Perhaps because of this there is much empiricism in this specialty, and Dr Horobin writes, "The dominant influences of such practical details certainly serve to underline the difficulty of achieving rationally devised electron microscopic, enzyme histochemical procedures, applicable to a wide range of tissues."

Other topics considered are methods using uptake of metals, immunochemical staining, and a chapter on some miscellaneous staining methods, including dyeing with reagents that are not dyes, the Gram reaction, and vital staining. A chapter on peculiarities of staining plastic sections includes some interesting considerations on the influence of differential infiltration of tissues by the plastic embedding medium on the pattern of staining.

A consideration of the interpretation and analysis of histochemical observations is followed by a chapter of supplements, giving brief explanations of chemical concepts mentioned in the text. Even with these supplements, much of the book is difficult for a non-chemist to comprehend. Although Dr Horobin states in the preface that the book is intended primarily perhaps for bench-workers seeking an understanding of the scientific basis of staining procedures, I doubt whether those who are applying histochemical methods to investigate biological problems will readily turn to it as a guide for rational action when methods do not proceed as expected. Nevertheless, I hope that this book finds its way on to the shelves of departments specialising in histochemistry, as Dr Horobin certainly has an original and interesting approach.

J D HARRISON

Specialised epidemiology

Trends in Cancer Incidence: Causes and Practical Implications. Symposium by the International Union Against Cancer and the Norwegian Cancer Society held in Oslo, 6-7 August 1980. Ed Knut Magnus. (Pp 446; \$49.50.) Hemisphere. Distributed by McGraw-Hill. 1982.

The enthusiasm of the Scandinavian cancer registries is apparent in the organisation of the symposium on "Trends in cancer incidence: causes and practical implications" and in the individual contributions in this text, which comprises the proceedings of the two-day symposium. It is a welcome addition to the published works on cancer statistics, principally because its prime concern is with data on incidence and not data on mortality. The overall layout is well thought out, with two sections on methodology preceding sections on six selected sites. The symposium planning committee were wise to decide not to cover all sites briefly but to present a group of thoughtful articles by cancer epidemiologists of international repute on selected principal sites, the range of which would cover many interpretations of trends and most practical problems of interpreting data on incidence. The reader should, however, appreciate that this is no textbook: in particular, the first two sections would not be satisfactory as an introduction of epidemiological principles for a clinician.

The value of data on incidence over the far more widely known and quoted data on mortality should be better appreciated. Despite the legal requirements to certify deaths (and the consequent near completeness of recording) statistical analyses of mortality almost invariably classify death according to the principal causes and therefore many cancers known to be present at the time of death (and even many reported on death certificates) are not reflected in mortality statistics. The older cancer registries in Scandinavia and in parts of England and of the United States of America have set a fine example in collecting data on all known incident cases of cancer for up to 30 years. Such a major investment in long-term epidemiological study bears fruit only many years later. The symposium on time trends of incidence and the papers included in this book are that fruit. Rather more prominence might have been given to making the simple point that the contents are based on data on incidence. Unfortunately the converse prevails and several contributors drift vaguely from mortality to incidence and back.

This book should appeal to the cancer epidemiologist and to one who is already reasonably familiar with the sources of data, biases, and methods of analysis. It is not easy reading. The sections on methodology and methodological problems are incomplete and do not, I think, provide a comprehensive and easily comprehensible introduction to the epidemiological principles and methods used in the analysis of data on incidence of cancer. Next there is a certain lack of homogeneity; one contributor describes a source of potential bias and a particular pitfall to be avoided and another contributor hurtles into that pit in another section—for example, a trend based on two cross-sectional studies in somewhat different populations interpreted as evidence for the cohort effect.

Within the sections on individual sites a mass of data is presented, frequently in reduced figure format. Many of the data are not new: they have appeared, albeit in different forms, in *Cancer Incidence in Five Continents*, in the National Cancer Surveys of the United States of America, and in various publications of the Scandinavian cancer registries. What is new is the presentation: here are not tables of crude data on incidence but groups of papers describing the observed trends and interpreting the underlying causes of these trends for six principal sites of cancer. Again there is some lack of homogeneity, some overlap of subject matter, some repetition of data, and some variability in quality of epidemiological rigour;

all of which seem to be nearly inevitable when the proceedings of a symposium are published. It would be better if the editor had weeded out certain papers and asked for others to be expanded.

The book contains much interesting material. It is likely to find its way quickly on to many cancer epidemiologists' bookshelves. I suspect, however, that it is too specialised, long, and expensive to be purchased by oncologists or non-cancer epidemiologists, who can refer to it in libraries.

ROBERT WEST

Concept of the whole child

Clinics in Developmental Medicine. No 80. "One Child." Ed John Apley and Christopher Ounsted. (Pp 189; £11.) Spastics International Medical Publications. 1982.

The two editors of the latest volume in this lively, varied and successful series have assembled the 12 essays to confute "the Cartesian split of human creatures into psyche and soma which has had a profoundly bad influence on the medical care of children." Each author writes on some subject broadly related to the interaction of mind and body in health and disease of children. The essays vary greatly in content, style, length, and difficulty. A brief catalogue is therefore necessary. They fall into four loose groups, though these do not correspond with their arrangement in the book. One group of four chapters deals with specific problems in psychosomatic paediatrics. A long chapter by the late John Apley recounts his studies of recurrent abdominal pain in childhood, with many interesting autobiographical asides. Robert Haggerty shows how stress can influence the occurrence of "physical" disease such as streptococcal illness. Gregory Stores discusses some psychosocial factors in epilepsy and the importance of their recognition in management of the disease. Bryan Lask gives a vivid account of the tensions within families that may produce childhood symptoms.

Another group of three chapters are more concerned with philosophy. David Taylor on "Diseases, illnesses and predicaments" covers some of the same ground on terminology as Dr Ian Kennedy did in his first Reith lecture, but with more understanding of what doctors do. Kit Ounsted gives a highly readable anecdotal account of some emotional problems in highly intelligent children of intelligent parents (there is nothing wrong with anecdotes provided they are good—as these are). Anthony Stevens writes about infant attachment in the context of the history and philosophy of behavioural sciences.

In contrast, the third group consists of two chapters on highly practical issues of the organisation of child care. Lewis Rosenbloom, on the care of handicapped children, rightly emphasises how paediatric neurology and "developmental paediatrics" should be linked in the service to a region. Dick Smithells gives a delightful and perceptive account of how paediatric outpatients may be run most effectively. Any consultant who has run such a clinic for several years will recognise everything Smithells describes, but will also get much practical advice. The final group contains three chapters that are fairly meaty reviews or studies. Gil Glaser writes on critical periods of brain development with particular reference to seizures and the limbic system. Meg Ounsted pursues her longstanding interest in size at birth, relating it now to growth and behaviour in infancy. Kolvin and Fundudis summarise their important but already published study on delayed language development.

The concept of the whole child and of the comprehensive approach to his health and illness has been central in British paediatrics—perhaps more so than Kit Ounsted allows in his

preface. It was exemplified by past giants like Donald Winnicott, Ronnie MacKeith—and, of course, John Apley, the co-editor of this book. It is carried forward by so many leading figures in contemporary paediatrics that it would be invidious to quote names. The collection of these essays reaffirms this concept, but do they really come together to make "One Book"? One characteristic linking several of them is that their authors enjoy words and writing; the reader is carried along on a flow of epigrams and aphorisms. Though this is a welcome change from much medical writing, it has its dangers. Thus John Apley surely cannot have written (or meant) that "Optimism is infectious and paediatricians are continually catching it from their *parents*." Though this may be true, the context demands that he meant "from their *patients*." This editorial slip shows how such a style may lead to the belief that if it sounds good it must be true. Another minor editorial grumble: has the misspelling "concensus" become so widespread that we shall soon have to accept it as normal usage? Or can the correct "consensus" still be rescued?

ROGER J ROBINSON

Anaesthesia in children

Monographs in Anaesthesiology. Vol 10. "Some Aspects of Paediatric Anaesthesia." Ed D J Steward. (Pp 377; \$95.) Excerpta Medica. 1982.

With the flood of books on paediatric anaesthesia that have appeared in recent years, the reader may be excused a feeling of dismay that yet another one has arrived on the scene. Dr David Steward should be congratulated, however, for selecting aspects of the subject that have been given inadequate coverage elsewhere and putting them together in a compact and readable form. The book aims to provide a source of reference for the full-time paediatric anaesthetist but also to help the practitioner who only spends part of his time with infants and children. This latter aim is particularly important, as many paediatric surgical procedures are performed in district general hospitals and in specialist units that cater for all ages.

The choice of topics fully supports the aim. The book is divided into two sections, the first dealing with basic scientific considerations and the second being more clinically orientated. The first section starts with a chapter by the editor on psychological aspects of anaesthetising children that is sensible and well presented, though sometimes too dogmatic: not everyone would agree that "the intramuscular route should not be used to administer premedicant drugs to children." A very comprehensive chapter by Salanitro on the kinetics of inhalation gas exchange in children deals with basic pharmacokinetics and then describes

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theoretical and clinical differences in children. There follow chapters on neuromuscular transmission by Goudsouzian and on fluid therapy by Furman. I found the most useful chapter in this section to be the detailed analysis of T-piece systems by Froese and Rose. They cover this complex subject extremely well, and it is useful to have information previously only available in scattered articles brought together in one chapter. The section is concluded by a commonsense approach to monitoring by Berry. It is refreshing to find an advocate of the "vigilant anaesthetist and his equipment working as a unit" and to note the emphasis on clinical care rather than sophisticated machinery.

The second section, entitled "Paediatric anaesthesia and acute care," begins with orthodox chapters on paediatric cardiovascular anaesthesia by Abbott and on neuroanaesthesia by Creighton. These are probably the only two topics in the book that have already been comprehensively covered elsewhere. A comprehensive chapter on anaesthesia for children with endocrine disease by Stehling is followed by one on ENT surgery by Brown (which surprisingly omits details of anaesthesia for tracheostomy). Smith and Smith then contribute one of the most important chapters in the book, dealing with considerations for the premature infant. Though one would hope that surgery in this high-risk group would be performed in special centres knowledge of the important differences in physiology between the premature and full-term neonate should help obstetric anaesthetists and ensure better care during transport. The book ends with important chapters on upper airway obstruction by Lockhart and postoperative cardiorespiratory care by Edmonds.

This book is well produced on good quality paper with clear print between hard covers. There could be more illustrations,

and those that do appear do not always help the text. Nevertheless, the book is a welcome addition to the published works, and should find a place on many bookshelves even in these times of financial restraint.

DAVID J HATCH

In brief

An old person may arouse irritation as well as sympathy. Many young people are prejudiced against the elderly and act as if they will never grow old. But most of them will, as more and more people survive into their 70s and 80s. What will life be like for these future generations of old people? Experts from 16 countries were asked this question and their views were compiled in *Aging 2000—a Challenge for Society*, by Philip Selby and Mal Schechter (MTP Press, £9.95). It is a difficult book to read but contains a lot of information for those determined enough to wade through. Firstly, in 20 years' time, a far higher percentage of the population will be old people. The services that deal with them are already under strain: unless policies change these services will become totally inadequate. Secondly, a better understanding and acceptance of the elderly is needed. If young people could appreciate the value of the elderly, rather than seeing them as a burden, then the lot of the elderly would be improved. *Aging 2000* paints a grim picture of the future in which old people will sink into neglect and distress, and it emphasises that measures need to be taken immediately.

Alcohol is drunk in most countries in the world, and most experience problems as a result. The world amount produced and consumed has been increasing for the past 20 years, and often one country is experiencing problems its neighbour experienced a few years before. Much alcohol—whisky, champagne, and cognac, for instance—is produced by large companies and marketed worldwide. These are all good reasons why those concerned to reduce alcohol problems should look to their colleagues in other countries for advice and information. The World Health Organisation provides one forum for these people to meet and work together, and one other such organisation is the Swedish-based Ansvär Mutual Insurance Company for Total Abstainers. To celebrate its 50th anniversary Ansvär commissioned an international survey of drinking habits, attitudes, preventive policies, and voluntary efforts, and the result is *Alcohol in the World of the 80s* by Gunno Armyr, Ake Elmer, and Ulrich Herz (available from Ansvär Insurance Company Limited, Ansvär House, 31 St Leonards Road, Eastbourne, East Sussex BN21 3UR, price £5 including postage).

The book also includes a report by James F Mosher on a seminar that Ansvär organised in Vienna in June 1981, at which representatives from 18 countries discussed international trends in alcohol consumption, problems, and control policies. Attractively produced, the hardback book has many photographs and graphs showing consumption trends in most countries for the past 30 years, and it includes sketches of habits, attitudes, preventive policies, and voluntary efforts for 20 individual countries. The Mediterranean countries are lumped together, as are the African and Latin American countries; Russia and China are not included, and there is little about Asian countries apart from India and Japan, and Eastern European countries apart from Poland and Hungary. The sketches are short, neat, and informative, and all sorts of fascinating tidbits as well as more profound facts emerge. In France, for instance, exactly the same percentage of the population—43%—drink wine regularly as drink tap water regularly. In France, too, "to abstain from alcohol is considered extremely deviant."

The section on Great Britain contains far too much informa-



Drinking traditional beer in Kenya.

tion on temperance organisations of and from which little is ever heard and includes at least one fact which is wrong—real prices have not only "not risen appreciably" in the past 30 years, they have plummeted. The section on Poland, which for some reason is written in more indigestible prose than most of the others, is useful but unfortunately stops short of the dramatic developments of the past two years. But, all in all, these sketches provide useful information for those who want to look at alcohol problems internationally, and the report on the Vienna seminar is even better. The delegates decided that after the large increase in alcohol consumption around the world since 1950 consumption is now levelling off. Problems, however, will probably continue to increase over the next five years and as a result both the public and governments will take more notice of alcohol problems. But because of the strength of "counter-interests" the policies that governments will adopt will be more "symbolic" than "useful." Amen.