BOOK REVIEWS

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Assessment of Cell Proliferation in Clinical Practice. Ed PA Hall, D A Levison, N A Wright. (Pp 210; hard cover DM 148.00) Springer. 1992. ISBN 3-540-19700-1

It has been interesting over the past decade and a half to observe the new trends in tumour histopathology which have been stimulated by novel technology and reagents. One of the current "flavours of the month" is the study of cell proliferation, particularly in malignant neoplasms, in relation to histological grade and, ultimately, to prognosis. The appearance of this volume is, therefore, timely. As one would expect from the editors and contributors, this is in general a publication of very high quality with a good balance between practical and theoretical information. The illustrations are in general clear and would give a useful guide to readers who were new to the field.

In summary, the first chapter gives a wide view of the mechanics and molecular events of the cell cycle. The various regulatory aspects are outlined and we are left wondering where all this will end! It will certainly be reassuring when eukaryotic systems (especially those in humans) are analysed in as much detail as yeasts. It may be that some readers could become rather "lost" in this section of the book simply because of their lack of syntax. None the less those who are enthusiastic should persevere and will find much of interest here. The section on growth factors is generally up-to-date and even the perplexing story of p53 is addressed. There is a surprising lack of account of the bcl-2 gene but otherwise this is a useful summary of the current literature. Another difficult topic is tackled by Ansari and Hall in the next chapter, which deals with cell proliferation and death in various tissues in an architectural and non-architectural sense. The taxing problems of the roles of stem cells and clonogenic cells are underlined.

Some stringent mathematics are given in the following chapter in relation to rate and state studies of cell proliferation, and the essential importance of some of the earlier studies are clearly revealed. This leads on logically to the trials and tribulations of counting mitoses, the method which would appear to be simplest and of the most obvious value in estimating proliferation in any tissue. The authors, however, remind us of the deficiencies of many studies in this field, many of which are known to be far from

stringent in undertaking mitotic scoring.

More "hi-tec" aspects of estimating cell proliferation are dealt with in the next chapter, in their usual clear and succinct way, by Camplejohn and Macartney, who review the value of DNA flow cytometry in this field, and the subsequent section brings us on further to the use of flow cytometry in BUdr labelling. (Sadly, one of the authors of this chapter died before publication.) BUdr can also be used for immunohistochemical localisation of proliferating nuclei and this technique is also outlined here.

In the following chapter the uses and clinical values of immunolabelling for Ki67 are outlined; it is unfortunate that some of the more recent work on sequencing and ultrastructural localisation of this antigen are not given. The authors continue to discuss the importance of PC10 labelling and its ability to demonstrate proliferating cells in paraffin wax sections. They then list the less frequently used antigens and also mention, most importantly, the possibility of studying non-proliferating or quiescent cells by means of immunohistochemistry. Nucleolar organiser regions, which have stimulated widespread interest in many countries in the last five years, are discussed by Professor Underwood and the evidence that they relate to proliferation (in general rather than ploidy) is given. Recent evidence that the numbers of "AgNORs" may be related to differentiation is not mentioned.

Finally, and very usefully, a chapter is included which mentions the importance in assessing clinical response of tumours to treatment of the various techniques described previously. This is, of course, the Holy Grail in relation to studies of proliferation (or for that matter any other stigma of malignancy).

In summary, I should recommend this book unreservedly to anyone embarking on research into cell proliferation or to pathology trainees who wish to update their information in this field. My one caveat is that the book is expensive for its size.

J CROCKER

Atlas of Tumour Pathology, Vol 1. (Third Series). Non-Melanocytic Tumours of the Skin. GF Murphy, DE Elder. (Pp 278; \$40) Institute of Pathology. 1991. ISSN 0160-6344.

This book concerns itself with the epithelial, adnexal, and dermal tumours of the skin, with all melanocytic lesions dealt with in a companion volume. It is produced by the AFIP and therefore has the benefit of a large pool of material from Armed Forces personnel as well as the products of a worldwide referral service. This necessarily produces a statistical bias in what is seen, but this volume is effectively untainted by this as the statistics regarding incidence are largely drawn from the literature. The coverage is broad but each tumour has a succinct section on clinical features, histological features, differential diagnosis and special studies. The illustrations are excellent; histology is in black and white, but there are several colour plates of gross pathology (what I understand dermatologists refer to as "clinical" pictures). The referencing still seems to favour the American literature with relatively little from European journals which in the days of

CD-ROMs in most libraries is odd. Omissions are few and not of great importance. I would have included sebaceous adenoma and I continue to believe that "inverted follicular keratosis" is a diagnosis sui generis and not just an irritated BCP involving the follicular infundibulum.

There is no competing book that I know of. The closest is probably the two volumes by Hashimoto and Mehregan (one covering epidermis, the other the adnexal tumours so there is no dermal tumour coverage). This AFIP fascicle is cheap, accurate, helpful and deserves a place on the shelves of any pathologist who has ever struggled with a skin tumour; and that means all of us.

D COTTON

Liver Pathology and Alcohol. Drug and Alcohol Abuse Reviews. Ed RR Watson. (Pp 576; \$99.50.) The Humana Press Inc 1991. ISBN 0-89603-206-X

Alcohol abuse is ubiquitous in our society and its effects can present to practitioners in any branch of laboratory medicine. This text is a collection of reviews dealing with, as a common theme, the mechanisms of alcohol induced liver disease. These range from the esoteric (genetic and dietary control of alcohol degradation in *Drosophila*) to the eminently practical (alcohol and hepatic iron homeostasis). This is a book to dip into, for whatever your specialty, you will learn something new, it may be useful, and it will certainly be stimulating. The only question the prospective casual purchaser might wish to consider is whether or not it is cost effective. For those whose practice involves the support of clinicians specialising in the management of liver disease this book must be essential reading.

ARW FORREST

Practical Guide to Surgical Pathology with Cytologic Correlation. A Text and Color Atlas. (Pp 359; 397 figs; DM 240.) Springer. 1992. ISBN 3-540-97538-1.

The stated aim of this book is to emphasise the interdependence of surgical pathology and cytopathology in tumour diagnosis by correlating the microscopic appearances demonstrated by both. Some non-neoplastic conditions, notably infections, are also included. There is a useful introductory note on general principles and methods, followed by 22 chapters which cover all major organ systems. These vary in content. Some, like skin, liver and kidney, deal mainly with histopathology, others—for example, body fluids, almost entirely with cytology. The text is often sketchy and brief, but some accounts, notably of the lung and mediastinum, the female genital tract and the central nervous system, are quite comprehensive, given the limited space that is available.

The book runs to 350 pages of text with 397 figures, many of which are multiple and most are in colour. Most of these are excellent, but some are affected by irritating

defects in exposure and staining. There are lots of empty spaces, some pages showing only a couple of paragraphs or pictures.

The inclusion of conditions like ulcerative colitis and Crohn's disease is puzzling as these do not seem to represent good examples of histocytopathological correlation. Spelling errors occur in headings and legends (sailadenitis, Grave's disease), and figures do not always display clearly the features that they are meant to: orphan Annie nuclei, for example. The chapter on lymphomas refers only to North American classifications, namely Rappaport and the National Cancer Institute's Working Formulation. Almost all the illustrations of the cytology of lymphomas show haematoxylin and eosin or Papanicolaou stained preparations.

This book is quite pleasing to the eye but it is difficult to see for whom it is intended. It certainly cannot be recommended as a bench book for either histopathologists or cytopathologists and the importance of using and correlating the techniques of both disciplines is no longer in doubt. Like Churchill's *Mr Bossom*, it is neither quite one thing nor the other.

P P ANTHONY

Pathology of AIDS and HIV infection. Vol 26 in the series **Major Problems in Pathology.** G Nash, J W Said. (Pp 217; £37.) WB Saunders Company. 1991. ISBN 0-7216-1540-6

This slim volume is a commendably compact and thorough distillation of practical clinical pathology of AIDS and HIV infection. Half is by the authors; the rest is written in comparable style and depth. There is a pleasing straightforwardness of approach, the whole giving a strong sense of being written from first-hand and substantial experience. Relevant issues such as epidemiology, infection control, and pathogenesis are covered in pithy, common sense, and readable accounts, with useful tabulations; while not attempting to cover every theory of pathogenesis, they extract the essence without loss of perspective or balance.

The bulk comprises systematic pathology in practical and authoritative sections, combining readability and thoroughness, with a sufficiency of detail for most practising clinical pathologists. I was impressed by the matching of detail with prevalence, avoiding the hazard of showing rare "stamps" in preference to the diversity of common ones. There is a wealth of references, but a disappointing tendency towards North American insularity; this also means very little coverage of the rather different range of pathology being encountered in Africa and South East Asia, which will frustrate those who see many patients from such areas.

Nevertheless, this book provides substantive coverage of the pathology of AIDS and HIV in developed countries. One can only cavil at tiny matters of detail and not with any issue of substance. The black and white illustrations are plentiful and well chosen; while one may bemoan the lack of colour, largely on aesthetic grounds, one would even more bemoan the inevitable increased cost. This book is a real gem at a very reasonable price. It would be a valued and much fingered possession for clinical pathologists, whether they see many such cases or few.

A J PINCHING

Laboratory Diagnosis of Viral Infections. 2nd ed. Ed L H Lennette. (Pp 783; \$224.25.) Marcel Dekker Inc. 1992. ISBN 0-8247-8585-1

Although there are now many excellent textbooks of clinical virology, few address in detail the particular problems of laboratory diagnosis. This book is aimed at those working in the laboratory, although detailed methods are not usually given, rather an overview of the various approaches to diagnosis for individual virus infections. It is divided into two parts, the first being a series of 10 chapters on general aspects of diagnosis, most considering individual techniques. These are valuable introductions and descriptions, and I particularly liked the chapter which discussed sensitivity, specificity, and predictive value of diagnostic tests. The remaining 28 chapters each discuss a particular virus or virus group, with each being subdivided into sections and variably considering epidemiology, clinical features, pathogenesis, treatment and prevention, as well as diagnosis.

The balance of these sections in each chapter varies, demonstrating the problems of consistency in a book of 49 authors. All authors are from North America, and hence the approaches described are not always those used in the United Kingdom. Particular examples are rubella, where complement fixation, indirect immunofluorescence, and passive haemagglutination feature prominently, and the attention given to western blot for HIV antibody detection. Despite the problem of relating its content to local approaches to diagnosis, this is a worthy addition to the bookshelves of the specialised virus laboratory as it contains a wealth of information not readily available elsewhere.

P MORGAN-CAPNER

Clinical Haematology. 7th edn. Eastham & Slade. (Pp 384; £19.95.) Butterworth Heinemann. 1992. ISBN 0 7506 1339 4

This little book, first published 30 years ago, has grown up. What used to be a pocket reference now weighs 0.65 kilos and in its new format will no longer fit into the pocket of a white coat.

Despite considerable revision, the book largely retains the flavour of the original. It is clinical haematology for people other than clinical haematologists, and the fact that the book has run to seven editions in four languages confirms the need for such a work.

There are things to complain about. Some speculation is too prominent; the relation of whole blood viscosity to deafness for example, and some statements are just not true any more. For example, it is no longer the case that 90% of haemolytic disease of the newborn is due to anti-D. There is a rather old-fashioned air in some sections. Subacute leukaemia features in lists as do compound F and splenin. Obsolete tests are described and then dismissed as obsolete. Idiopathic haematemesis rubs shoulders with pseudo-haemophilia.

I was delighted to learn that lack of social contact leads to a low white cell count and surprised that smokers are thought to have a lower chance of a postoperative DVT than non-smokers.

Confusion in one or two places is caused by transposition and typographical errors—for example, table 5.2 is headed "polycythaemia" instead of "myelofibrosis". The index is not entirely accurate. The layout can be confusing at times, particularly where sections follow on without a gap and the headings are insufficiently emphasised. Earlier editions were laid out rather better, although the type face in the new book is wonderfully clear.

As in previous editions, a major defect is the scant attention given to blood transfusion. Less than three pages are devoted to the topic, no test principles are described and no guidance given on the interpretation and relevance of the results of serological tests.

The new sections stand out. They are well written, concise accounts which put some flesh on the bones of endless lists. This is not a book for reading but it remains one of the best guidebooks to the interface between laboratory tests and this expanding discipline of medicine.

D W GORST

The Leukemic Cell. 2nd ed. Ed D Catovsky. **Methods in Haematology.** Vol 2. (Pp 448; illustrations 212; £60.) Churchill Livingstone. 1991. ISBN 0-443-03867-8

This book should be bought by all haematologists who have an interest in leukaemia. The 14 chapters are written by an international cast of experts, providing an authoritative guide to current thinking on all aspects of leukaemic cells and illustrating the rapid developments which have occurred with new techniques since the first edition of this book published 10 years ago.

The high standard of writing and editorship is well illustrated by Professor Daniel Catovsky's overview in chapter 1, followed by contributions on cytochemistry and bone marrow histology. These classic disciplines can sometimes be overshadowed by the newer technologies but their essential role in diagnosis is emphasised. Over recent years some of the greatest progress in investigating leukaemic cells has been in the area of immunology and for those haematologists lost in the CD maze, help is at hand with comprehensive chapters on the use of monoclonal antibodies and on immunocytochemical labelling with monoclonal antibodies. Another important aspect of investigation of the leukaemic cell has been the increasing knowledge gained from chromosomal analyses and these are lucidly described in relation to acute leukaemia and the T cell malignancies. Cytogenetic discoveries have led on to the newer approach of genetic analysis which is described in two contributions, one on immunoglobulin and T cell receptor gene analysis in lymphoproliferative disorders and one on the analysis of molecular changes in leukaemia. Readers will also find much to interest them in chapters on ultrastructural morphology, lymphocyte functional assays, and in vitro clonal culture of myeloid cells. The text is well written, the illustrations of good quality, and most of the chapters contain extensive technical appendices. This is a practical book which should be readily available for everyone working in diagnostic and research laboratories who have an interest in learning about leukaemia and how to investigate it.

D A WINFIELD