

Table 2 Results of culture of specimens from patients with other pulmonary effusions

Results of culture	No of specimens
No bacterial growth detected	29
Mixed coliforms and anaerobes	29*
Anaerobes only	10†
<i>Staphylococcus aureus</i> only	1
Mixed anaerobes and <i>Streptococcus milleri</i>	2
Total	71

*Eighteen patients had fistulae with the gastrointestinal tract.

†Eight patients had fistulae with the gastrointestinal tract.

absent (Table 1). On the other hand five isolates of *S milleri* were mixed with coliforms anaerobes when recovered from eight other patients, of whom seven had such fistulae. The overall isolation rate of *S milleri* was 57%. When pleural fluid from patients with conditions other than those above was examined coliform and anaerobic organisms predominated while *S milleri* represented less than 3% of the total isolates (Table 2). Clearly, in patients with deep seated pulmonary involvement *S milleri* was most often isolated either in pure culture (no gastrointestinal fistulae) or as part of a mixed flora (with gastrointestinal fistulae). *S milleri*, however, was less frequently isolated when there was no extensive pulmonary disease, despite the presence of gastrointestinal fistulae.

Pulmonary abscesses have many underlying clinical causes and bacterial isolates include a mixture of anaerobes, coliforms, and microaerophilic streptococci. In this series it seems clear that *S milleri* is the main causative agent in empyemas and pulmonary abscesses when the infection is strictly contained within the pulmonary cavity and occurs as part of a mixed flora when gastrointestinal fistulae are present. The natural habitat of the organism includes the mouth, upper respiratory tract, gastrointestinal tract, and vagina. Although bacteraemia with metastatic abscess formation can occur, it is more likely that in our patients invasive and purulent lesions occurred as a result of regional spread of the organism from the mouth and respiratory tract to the pulmonary cavity as a result of local disease, trauma, or surgery.

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References

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- 2 Bartlett JG, Finegold SM. Anaerobic pleuropulmonary infections. *Medicine* (Baltimore) 1970;51:413-50.
- 3 Waitkins SA, Ball LC, Fraser CAM. A shortened scheme for the identification of indifferant Streptococci. *J Clin Pathol* 1980;33:47-52.

Book reviews

Pathology of Skeletal Muscle. Stirling Carpenter and George Karpati. (Pp 754; £85.) Churchill Livingstone. 1984.

This is an unusual book which grows in attractiveness the longer it is used. The format is unusual: five basic chapters on the normal and abnormal structure of muscle followed by an alphabetical ordered descriptive pathology of individual muscle diseases, so that, for example, ischaemic myopathy precedes limb girdle dystrophy which is followed by malignant hyperpyrexia syndrome. I found this irritating but as I became familiar with the format the disadvantage became trivial. It is a beautifully produced book with splendid photographs at light, semi thin, and ultrastructural levels. The chapter on pathological reactions is thorough and the sections on individual diseases informative. It is probable that the book had a long gestation at the printers: relatively few references are in the past three or four years. The book is not cheap but this reflects the quality of production. It is a good buy for the departmental library.

G SLAVIN

Clinical Chemistry in Diagnosis and Treatment. Joan F Zilva and PR Pannall. (Pp 539; soft cover £9.) Lloyd-Luke. 1984.

For a text book to achieve four editions is a mark of great success.

The fourth edition of Zilva and Pannall is very much the mixture as before but with text clarified and brought up to date. A new chapter on drug monitoring has been added.

The book is intended for medical students and junior hospital staff but it is probably the best general book for those preparing for the primary MRC Path providing they supplement it with intelligent reading around.

BRENDA SLAVIN

Quality Assurance and Control in Clinical Laboratories. Selected papers from a Symposium held in the University of Hull, 1984. Ed AD Farr. (Pp 191; paperback £5.) Institute of Medical Laboratory Sciences. 1984.

This book comprises 27 papers presented at a symposium organised by the IMLS in April 1984. Inevitably the standard varies, but the scope is remarkably wide ranging and topical, and covers blood transfusion, cellular pathology, clinical chemistry, haematology, immunology, and microbiology.

Many of the papers give a wealth of practical advice on the selection of methods and reagents, trouble shooting, and internal quality control, as well as the lessons learnt from external quality assessment schemes in each discipline. Several are more philosophical and give thought provoking ideas and comments on the current state of their particular art. Perhaps the most challenging comment comes in the Chairman's introduction: that good performance must mean "good" for the patient, and this means not only ensuring the analytical reliability of the result but also its usefulness in terms of its effect on the clinical outcome. Quality control of the request would be a good theme for a future symposium.

All who work in clinical laboratories can learn something from this useful little book.

PMG BROUGHTON

The Science of Biological Specimen Preparation for Microscopy and Microanalysis. Ed JP Revel, T Barnard, GH Haggis. (Pp 246; US \$43.00.) Scanning Electron Microscopy Inc, 1984.

This publication is a compilation of papers presented at the 2nd Pfefferkorn conference held in the USA in April 1983. The publishers, who sponsored the conference, are also known for their annual conferences and journal on Scanning Electron Microscopy. The present book follows the format of the SEM journals, utilising, in the main, camera ready copy of typescript manuscripts submitted by the authors.

The contents cover a wide range of technical topics, including the chemistry of fixation methods, resin embedding and sectioning techniques, methods for the preparation of frozen and frozen hydrated tissues, freeze-etching, and many others. The individual papers, 28 in total, vary somewhat in their approach but in general

incorporate a review of existing technology and a discussion of the current state of the art. The papers are well illustrated and contain detailed technical information.

This is a specialist's book, rather than a beginner's. EM laboratories and individuals involved in advanced EM techniques will find it a useful source of reference to current methods in various specialised areas of biological electron microscopy, with the emphasis on the underlying scientific principles of the methodology.

PG TONER

Laboratory Animal Medicine. Ed JG Fox, BJ Cohen, and FM Loew. (Pp 750; \$60.00.) Academic Press. 1984.

Every scientist who enjoys both the privilege and the need to work with laboratory animals must be sensitive to the special circumstances of their husbandry and to the requirement for humane experimental techniques. To meet these demands the management of laboratory animals has developed into a discipline in its own right.

Laboratory Animal Medicine is produced by the eponymous American College. It is intended to describe all major aspects of biology, husbandry, disease, and experimental techniques considered appropriate for species likely to be used in the laboratory, ranging from amphibian to primates. It is reasonably comprehensive, often well illustrated, and contains very many references. It is also (and appropriately) dominated by American practices, some of which would not be accepted in Britain. Overall, it is of definite value as a source of ideas and experience, and should be consulted by all experimentalists, but it can only be regarded as complementary to our UFAW Handbook, the forthcoming joint Royal Society guidelines, and the various specialised monographs now available.

AD DAYAN

Textbook of Gastroenterology. IAD Bouchier, RN Allan, HJF Hodgson, and MRB Keighley. (Pp 1560; £55.) Bailliere Tindall. 1984.

This multi author textbook has four editors and aims to be a comprehensive textbook of gastroenterology giving sound clinical advice with a scientific basis. It is heartening that the two important subjects of the irritable bowel syndrome and functional gut disease are given prominence and are covered fully and eloquently in a balanced

manner. However, although the authors say they have not eschewed controversy, the editors have allowed very controversial things to be said in a somewhat dogmatic manner. For example, it is very difficult reading the chapter on biliary dyskinesia to know which patients would respond to endoscopic sphincterotomy. This diagnosis was popular in the fifties and sphincteroplasties were done by surgeons in the fifties and sixties, but the procedure fell into abeyance when the results of longterm follow up were disappointing. Certainly, some of the features of these patients would make one suspect that it would be difficult to distinguish them from patients with "non-disease" as described by Clifford Hawkins. Furthermore, although Dr Watson is very fair in saying that the coeliac compression syndrome is controversial, he gives no clear indication as to how to select from the myriads of patients with abdominal pain, an epigastric bruit, and coeliac compression on radiology those who will benefit from operative treatment. Certainly, it is now common practice to endoscope all patients with gastric ulcers and also those who have had upper gastrointestinal bleeds. One would have liked to have seen an analysis of the pick up rate for gastric lesions by endoscopy compared with good double contrast barium meals and the effect on ultimate mortality of the slightly earlier diagnosis of carcinoma. Although the author on gastrointestinal haemorrhage declares that it has been stated that early endoscopy does not alter the mortality of the bleeding episode, he goes on to say that the view that early endoscopy is not mandatory should be resisted strenuously. But he bases this on a personal statement by an enthusiastic endoscopically orientated physician rather than on an analysis of the published work. Clearly, endoscopy does have an important role in the design of trials and search for better treatment but not necessarily in the routine management of upper gastrointestinal haemorrhage.

In a future edition I hope that the design of the book will make it easy for the reader to know who is writing the section he is reading. At the moment the authors of the individual sections are given only at the beginning of each chapter, not even on the initial title page, and it is difficult to thumb through the book to try to find the appropriate author, which can be infuriating. Furthermore, it can be difficult to find out where the appropriate references are. The editing has not been meticulous, as shown by the lack of sequential numbering of the tables and figures in the chapter on small

gut disease.

This book should have a good future but it needs more careful editing and cross reference between editors so that a more uniform view can be put forward. If not, it might be useful, as in other textbooks in other disciplines, for the editors to give comment on the contributions where there are controversial.

A DAWSON

Ultrastructural Effects of Radiation on Tissues and Cells. Proceedings of the Scanning Electron Microscopy Meetings 1981 and 1982. Ed KE Carr and TM Seed. (Pp 172; paperback \$20.) Scanning Electron Microscopy Inc. 1984.

This paperback volume is a compilation of seventeen papers originally published in the proceedings of the Scanning Electron Microscopy meetings of 1981 and 1982. The contents, therefore, have already been available for some time to the readers of that journal. The justification for their republication lies in making these papers more widely available to a topic based rather than a technique based readership.

Cell and tissue radiobiology has tended in the past to concentrate more on kinetic and statistical considerations, giving relatively less attention to morphology. These papers help to redress the balance, dealing as they do with ultrastructural aspects of membranes, cell surfaces, cytoplasmic and nuclear alterations, and tissue contours in response to irradiation of various types. The papers are all reviewed, each concluding with a 'dialogue' between reviewer and author which enhances the value of the text. It is fair to say that while the book has a common theme in ultrastructural radiobiology it rather lacks a thread of continuity, an inherent feature of a compilation of this sort.

This is not a text book but a collection of research reports concerning the application of ultrastructural techniques in diverse areas of radiation biology. As such, it will be of greater interest to specialists in these fields than to a more general readership.

PG TONER

Computer-Assisted Image Analysis Cytology. Monographs in Clinical Cytology, Vol 9. Vol ed SD Greenberg. (Pp 201; DN 117; US \$58.75.) Karger. 1984.

A compilation of eight papers relating to various aspects of image analysis is contained in this book. Two of the items dis-