

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

- 1 Parker MT, Ball LC. *Streptococci milleri* as a pathogen for man. In: Parker MT, ed. *Pathogenic streptococci*. Surrey: Reed books, 1979;234-5.
- 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