Immunohistological detection of *Legionella pneumophila* in lung sections

We were interested in the results reported by Theaker *et al*¹ in relation to the well publicised outbreak in Stafford to which they refer. We draw your readers' attention to a similar but less extensive investigation² of the equally well publicised "Benidorm" episode,³ performed before monoclonal antibodies were generally available. Organisms have also been shown in tissue sections by a glucose oxidase immunoenzyme technique.⁴

Although the negative cases reported by Theaker *et al*¹ are likely to be genuine, we draw their attention to the range of results in our publication.² Some organisms did not stain with the type specific antisera because the patient's antibody was coating them. While it is possible that some of the negative results reported by Theaker *et al* may be due to the same blocking process, their use of trypsin might have assisted in unblocking the bacterial antigen. We did not use pre-staining digestion with trypsin.

As the authors suggest, the histopathological study of tissue from patients with pneumonia both during life and after death has been advanced considerably by these and other staining procedures.

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Determination of end point of edetic acid decalcification

For acidic methods of decalcification the commonly used method for determining whether decalcification is complete is ammonium oxalate (AO) to precipitate the Ca²⁺ from the decalcifying fluid. When no more Ca-oxalate precipitate is seen in the most recent change of decalcifying fluid, then the decalcification is completed.

Although Kiernan¹ claimed that AO could be used to determine the end point of decalcification with disodium ethylenediamine tetra-acetic acid, all other authors recommend radiology or physical methods, such as cutting, bending, or needling,²⁻⁴ or even weighing.⁵ Culling *et al*⁶ stated that the ammonium oxalate method does not work with edetic acid, and this is the general experience.

A simple way to free the calcium from the chelate is to pour the edetic acid decalcifying fluid into a crucible, evaporate to dryness, and then let the residue char. It is important that no white desiccated but not decomposed edetic acid is left. When cool, the inorganic salts are dissolved in 10% hydrochloric acid. Because there are carboxyl particles in this solution, it is necessary to filter it before making alkaline with ammonia and adding the saturated ammonium oxalate solution.^{1-3,6}

A similar result would be achieved by using an atomic absorption spectrophotometer to pyrolyse the Ca-edetic complex and directly detect if calcium is present.

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Book reviews

Cytology of Body Cavity Fluids. A Colour Atlas. EB Butler, CM Stanbridge. (Pp 70; £30.) Chapman and Hall Medical. ISBN 0-412-25600-2.

Since body cavity fluids constitute a significant part of the workload of every diagnostic cytopathology laboratory, a new British monograph on this subject is welcome. The book begins with a section on the appearances seen in specimens from normal patients. Today when peritoneal lavage is increasingly being performed at laparotomy, this is a valuable feature since the cellular patterns may differ considerably from those seen in paracentesis specimens. This chapter is followed by an account of non-malignant conditions, but the major portion of the book is devoted to malignant disease including mesothelial, epithelial, and non-epithelial lesions. The techniques described and illustrated are largely standard laboratory methods, with conventional Papanicolaou and Romanowsky staining. A small section is devoted to the features seen in cell block preparations using the transmission electron microscope. The illustrations are somewhat uneven in quality, both in colour and in black and white. While this may perhaps be unavoidable with some specimens, it detracts to some extent from the usefulness of this monograph as a basic laboratory handbook.

HELENA E HUGHES

Atlas of Urinary Sediments. Diagnosis and Clinical Correlations in Nephrology. G Piccoli, D Varese, M Rotunno. (Pp 210; \$82.50.) The Raven Press. 1984. ISBN 0-890004-507-0.

This is a beautifully illustrated atlas which is basically subdivided into a section dealing with the morphological aspects of different constituents of urine—that is, red cells, white cells, crystals, etc. This is well done and appropriately illustrated. While commenting on the recent interest in dysmorphic erythrocytes it properly introduces a cautionary note with respect to urine deposits in which it is not possible to separate "glomerular" from "non-glomerular" haematuria. This section is very detailed and especially important in that it illustrates "artefacts" which may confuse the inexperienced microscopist.

The other major section is that dealing with the urinary sediment in the differential diagnosis of renal failure. This is again very well done but tends to be influenced by the authors' personal experience. This is inevitable as there have been extremely few carefully controlled blind trials for examining the urinary sediment in relation to different nephrological diseases. While their comments on changing appearances in the urinary sediment in the progression of glomerular disease may indeed be true, the reader must be a little cautious in accepting their observations as "absolute". Similarly their observations on the diagnosis of acute renal failure due to nephrotoxins or ischaemic injury on the basis of excretion of epithelial cells, whether free or in casts, may be challenged by some, as in clinical practice such easy distinction is rarely made. Again, however, this may be a function of the care and attention given to examination of the urinary sediment.

Overall, I think this is an excellent and comprehensive atlas focusing yet again on the enormous importance of careful examination of the urinary sediment.

WR CATTELL

Immunopathology of the Small Intestine. Ed MN Marsh. (Pp 461; £45.) John Wiley. 1986. ISBN 0-471-90706-5.

Mucosal immunology is a rapidly moving subspecialty. The increase in interest in this area is reflected by the publication in the past few years of a number of text books, the latest of which has been edited by Michael Marsh from the University of Manchester. The book contains 16 chapters, written by well known investigators in the area, and is divided into four main parts which cover the control of mucosal integrity, immunopathology of mucosal infection, models of immune mediated intestinal damage, and immunopathology of food associated intestinal damage. The book is well edited with little repetition of the same information in different chapters. There are relatively few typographical errors and the figures and tables are of good quality. As befits the title the emphasis is on the immunopathology of intestinal disease. This is appropriate because most of the information on human gut disease is in fact based on pathologic studies. I applaud the editor for his decision to omit the usual obligatory chapter on inflammatory bowel disease. I particularly enjoyed the chapter by Weinstock on the immunoregulation of

granulomatous inflammation in the liver and intestines (with numerous references) and the editor's own chapter on coeliac disease in which he reviews, in typical idiosyncratic fashion, his studies on intra-epithelial lymphocytes. The book has, however, a few flaws. The chapter on malnutrition and intestinal immunity is poorly referenced. The chapter by Isaacson on the association between coeliac disease and malignant lymphoma is out of date; at the very least an addendum to this chapter describing the author's own studies published last year showing that malignant histiocytosis of the intestine is a T cell tumour should have been included. These, however, are relatively minor complaints and I would recommend the book to anyone interested in gut immunology.

TT MACDONALD

Cardiac Muscle. Handbook of Microscopic Anatomy Vol 2, part 7. ED Canale, GR Campbell, JJ Smolich, JH Campbell. (Pp 318; DM 460.) Springer. 1986. ISBN 3-540-16379-4.

An immense number of excellent contributions on various aspects of basic heart muscle research have been collated in this compact, eminently readable volume. The content is not confined to the learned reader. In the introduction, the mammalian heart is described in simple terms, and gradually leads to the most detailed and comprehensive description of structural detail without losing continuity. The book is subdivided into seven other major sections including morphology of the working myocyte, morphometry, the conduction system, innervation, development of cardiac muscle and the conduction system, as well as hypertrophy. Each section is appropriately subdivided into the different components that constitute a particular part of the heart including species differences. Controversial topics such as the internodal pathways are discussed and brought to a logical conclusion on the evidence that exists. The book contains 101 illustrations of the highest technical standard, and the subject is comprehensively reviewed.

I can unreservedly recommend this publication to serious workers engaged in the study of heart muscle, be they at the beginning of their career or the height of their fame.

EGJ OLSEN

Notices

Joint Royal College of Surgeons/Imperial Cancer Research Fund Histopathology Unit

As part of this unit, which has been established for the purpose of advancing the science of diagnostic histopathology, a panel of experienced histopathologists provides advice on diagnostic problems to any pathologist seeking a second opinion. Material can be sent as wet tissue, fixed tissue, paraffin blocks, or sections. If stained sections are submitted additional unstained sections should be sent whenever possible. Where blocks are sent, they will be returned in due course when the sender indicates that this is necessary. Special arrangements can be made, where possible, for the examination of frozen sections or material requiring electron microscopy. There is no charge for these services.

The Panel is now in its third year and has dealt with an average of between four and five cases per week. These have come from more than 50 different hospitals in the United Kingdom and from 10 different countries. The membership of the panel at present includes: Professor NFC Gowing, Professor DH Mackenzie, Dr BC Morson, Dr RCB Pugh, Professor H Spencer, Dr AG Stansfeld, Professor AC Thackray and Dr KAD Turk. The work of the panel is being coordinated by Professor B Cohen from whom request forms can be obtained and to whom enquiries can be addressed at: the Histopathology Unit, 35-43 Lincoln Inn Fields, London WC2A 3PN (01-241 0200).

ASSOCIATION OF CLINICAL PATHOLOGISTS

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