

Dr Lucas comments:

I welcome the comments of Drs McWilliam and Curry on the problems of diagnosing microsporidiosis in small intestinal biopsy specimens. Of course, the final arbiter is properly prepared electron microscopy. The "probable spores" in our cases were "probable" on electron microscopic examination of very limited quantities of material originally taken to paraffin wax, then reprocessed. The important point is that the spores seen by light microscopy of smears stained with haematoxylin and eosin in the case of microsporidiosis definitely confirmed by electron microscopy were identical with those seen in stained sections of our other four cases (our figs 2 and 3 showed different patients). Thus I feel confident in making the diagnosis when these characteristic intracellular bodies are seen.

If they are not seen by light microscopical examination the diagnosis of microsporidiosis cannot be excluded. Sampling is one reason. Also, in my experience only the spore and spore-forming stages of the life cycle of intestinal microsporidia can be seen on standard haematoxylin and eosin staining; the meront stages (which may be more numerous than spores) are essentially invisible, only being identified by electron microscopy.

Finally, a large series of small intestinal biopsy specimens from American homosexual HIV positive patients was reported at a recent AIDS conference. Of 71 biopsy specimens from 67 patients, 22 showed microsporidia by transmission electron microscopy. Seventeen of these 22 positive cases were also identified on semithin sections. Tantalisingly, the authors say, "in retrospect, parasites were also visible by light microscopy in many of the standard haematoxylin and eosin stained sections". We eagerly await the definitive publication.

I think that pathologists can spot these protozoa in many instances in ordinary sections, but as Drs McWilliam and Curry say, we certainly need more experience of this parasite, with confirmation by electron microscopy.

Peliosis thymomias

Peliosis thymomias is probably a misnomer.¹ The latin translation of peliosis of a thymoma is peliosis thymomatis.

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¹ Peliosis thymomias: association with tuberculosis. *J Clin Pathol* 1989;42:331.

Rapid urease tests for Campylobacter pylori

We read the reply of Vaira, Holton, and Salmon to the points raised by us in our paper.¹ The authors state that, "the results of 2% urea test, 6% urea test (CP test), and CLO test were done at five, 10, and 20 minutes. The results at one, three, and 24 hours are also given in our letter". Vaira *et al* have reported the results with these three tests (table 2) at five, 10, and 20 minutes, one hour, two hours, and 24 hours in an in vitro urease test of *C pylori*, *Proteus*, and *Klebsiella*

strains, and not an in vivo study using mucosal biopsy specimens.² As we pointed out, in the in vivo study Vaira *et al* read the results of the CLO test at 20 minutes, 90 minutes, and 24 hours, results of the 2% RUT at three hours, four hours, and six hours, results of the CP test at 15 minutes, 20 minutes, and two hours. In their subsequent letter the authors reported the sensitivity and specificity of various tests, but comparison of sensitivity and specificity of various tests at different time intervals was not described either in the tables or in the text.²

The original letter of the authors³ concerns the four hour urease test which uses 2% urea broth and incubation at 37°C. The text of this letter gave the sensitivity and specificity of the test at four hours, but as the test was read at a fixed interval of four hours, the authors' point that they gave the sensitivity and specificity of tests at different times in the text of their original letter does not hold true.

We had raised these basic points to arrive at an understanding of whether the results with different types of rapid urease tests with different media should be read at different time intervals or at the same fixed interval. The point remains unanswered.

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- 1 Bhasin D, Yachha S, Ayyagiri A, *et al*. How specific is rapid urease test for diagnosing *C. pylori*? *J Clin Pathol* 1989;42:671.
- 2 Vaira D, Holton J, Cairns S, *et al*. Urease tests for *Campylobacter pylori*: care in interpretation. *J Clin Pathol* 1988;41:812-3.
- 3 Vaira D, Holton J, Cairns S, Falzon M, Salmon P. Four hour rapid urease test (RUT) for detecting *Campylobacter pylori*: is it reliable enough to start treatment? *J Clin Pathol* 1988;41:355-6.

A five minute stain for Campylobacter in tissue

Gray *et al* described a 30 minute stain for *Campylobacter* using 2% Giemsa without differentiation.¹ We have also found this method successful. By chance we also used stronger stain with shorter times of staining. The results were better because there was less background staining.

Our technique is to stain with 20% Giemsa for five minutes, then blot dry on filter paper, and very quickly dehydrate in one jar of absolute alcohol and transfer to Xylol before any loss of stain has occurred into the alcohol. After five minutes the staining of the *Campylobacter* is as heavy as that after longer staining. An advantage of the shorter staining time is that the background mucin stains less intensely, as do the gastric glands. As a result *Campylobacter* can be seen deep in the mucin of the gland crypts as well as in the mucin on the surface. The 20% Giemsa has a bench life of a month if kept at room temperature.

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¹ Gray SF, Wyatt JI, Rathbone BJ. Simplified technique for identifying *Campylobacter pyloridis*. *J Clin Pathol* 1986;39:1279-80.

BOOK REVIEWS

A Colour Atlas of AIDS and HIV Disease. 2nd ed. CF Farthing, S Brown, RCD Staughton. (Pp 115; £16.) Wolfe Medical Publications. 1988. ISBN 0-7234-0995-1.

The first edition of this book was produced in 1986, and in the intervening two years until the availability of this edition experience of HIV disease has been broadened. This is well reflected in this edition which includes a more wide ranging account of the clinical manifestations of HIV disease. The appendices have also been expanded to cover important topics including the full Centers for Disease Control definition of AIDS and advice for people who are HIV antibody positive.

As with the first edition, the pictures are all of high quality, which, when coupled with the concise text, make this book highly recommended reading for all health care personnel who are interested in, or more especially involved with, the care of people with HIV disease and AIDS.

P GRINT

Disorders of the Spleen. Major Problems in Pathology. Vol. 20. Barbara C Wolf and Richard S Neiman. (Pp 211; £37.50.) WB Saunders. 1989. ISBN 0-7216-2503-7.

Most pathologists become decidedly uneasy when called on to interpret the histology of the spleen, not least because definitive accounts of splenic pathology are few and far between. This book goes a long way towards remedying this deficit. The information is presented in a precise and well ordered fashion and in most areas is admirably up to date and comprehensive: it is also supplemented by many helpful diagrams, tables, and references. Indeed it is difficult to find omissions, although more data regarding the hairy cell leukaemia variants—possibly the most common primary splenic neoplasms—would have been useful. It must also be said that not all of the photomicrographs (mainly in black and white) are wholly successful and some would have benefited from higher magnification.

All the same these are minor complaints and most pathologists, haematological or otherwise, will welcome this most creditable account of splenic pathology and might at last begin to make some sense out of an organ which hitherto has jealously guarded its mysteries.

F D LEE

Recent Advances in Clinical Pharmacology and Toxicology. No. 4. Ed P Turner, GN Volans. (Pp 276; \$45.) Churchill Livingstone. 1989. ISBN 0-443-03297-5.

Five years have elapsed since publication of the last *Recent Advances in Clinical Pharmacology*, and in producing the latest volume the editors have taken the initiative to broaden its scope to include recent advances in the field of "clinical toxicology". Thus a very wide and often puzzling array of subject areas are covered in the present volume. For example, the first of the 13 essays is an