A modified haematoxylin and eosin stain for histological sections of lymph nodes

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Good cytological detail, especially good nuclear detail, is obviously of value to the histopathologist when examining sections of lymph nodes and, in particular, when examining lymph nodes from patients suspected of having a malignant lymphoma.

In an attempt to improve the nuclear detail of lymph node sections, we have recently established a routine of staining lymph node sections with a modified haematoxylin and eosin stain in addition to the standard haematoxylin and eosin stain and a reticulin preparation.

Material and methods

3 μ sections of formalin-fixed paraffin-embedded tissue are cut and stained with the modified haematoxylin and eosin stain.

Haematoxylin (Harris)

0.5 g eosin Y

0.2 g phosphotungstic acid

1 drop saturated aqueous lithium carbonate

100 ml of 95% alcohol.

Received for publication 23 January 1978

Results

We have found that, using this stain, there is a noticeable gain in nuclear detail when compared with sections stained with the standard haematoxylin and eosin. This modified haematoxylin and eosin is a useful adjunct to the procedures normally used by the histopathologist when dealing with lymph nodes.

Discussion

Slidders (1969) has discussed the effects of an alcoholic solution of phosphotungstic acid on already stained nuclei. He noted an increased resistance of haemalum-stained nuclei to the acid components of several trichrome stains and he produced trichrome stains of 'notable nuclear detail'. We have used an alcoholic solution of phosphotungstic acid in the modified haematoxylin and eosin stain and found that it produces improved detail in nuclear staining.

Reference

Slidders, W. (1969). A stable iron-haematoxylin solution for staining the chromatin of cell nuclei. *Journal of Microscopy*, **90**, 61-65.

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Letters to the Editor

Synergy between sulphonamides and trimethoprim in the presence of pus

As the paper by Edmunds (*Journal of Clinical Pathology*, **31**, 162, 1978) contains some inferences different from those of our own work (*Journal of Clinical Pathology*, **31**, 165, 1978), we would like to offer the following explanations and comments:

1 Edmunds claims to have demonstrated synergy by the application of two different antibiotic disks in proximity and comparing resultant zones with those from the individual disks. The increased zones of inhibition from the combined disks do not necessarily denote synergy but

could simply be due to additive effects. Controls consisting of placing two similar disks close together might have strengthened the claims for synergy. It is puzzling why no minimum inhibitory concentrations were performed, and these surely must be included in any paper claiming synergy.

2 The observations of Edmunds are confined exclusively to zones of inhibition that express bacteriostatic activity. Our work has included assessment of the bactericidal activities of trimethoprim, sulphamethoxazole, and the combination. We have never found any bactericidal synergy exclusive to the combination, that is, the cidal activity of trimethoprim

alone is not enhanced by sulphamethoxazole *in vitro*.

3 The diluted pus may have lost some of its thymidine content during preparation of the plates; this possibility is particularly likely for the pus that was filtered where some thymidine might have become adherent to the filter or cellular debris. Many workers have isolated thymidine-requiring mutants from purulent material, so there must be a continuous release of available thymidine in some samples of pus. The use of a particular aliquot of pus will contain only a fraction of the potential thymidine *in vivo* where both necrotic bacteria and leucocytes probably contribute to levels of this substance.