Correspondence

Fine needle biopsy: effect of needle size.

Sir,—In their recent leading article, Hall-Craggs and Lees1 stated that no single study comparing the diagnostic yield of different needle sizes was available. This is no longer correct.

In a study of percutaneous pancreatic biopsy, Dickey et al.2 reported on the sensitivity rate in pancreatic carcinoma using 22 and 20 gauge needles. The respective rates were 71.9% and 86.7%. The overall diagnostic rates for all types of pancreatic lesions were 61.8% and 73.3%. A 19 gauge sheathed needle was used for lesions with fluid or necrotic debris where a pseudocyst was a possibility. The overall diagnostic accuracy of the 19 gauge needle was 81.8%. No case of pancreatic carcinoma was biopsied using the no 19 needle.

Furthermore, several studies have attested to the value of combining cytology with histology in the diagnosis of hepatic malignancy.3-5 These reports have indicated that in 12–15% of cases the cytological specimen alone is positive.

Fine needle aspiration is of particular value in the identification of hepatic metastases. Large needle biopsy has a success rate in metastatic liver disease ranging from 23–78% but the higher percentages apply only to cases with extensive liver involvement.6 In a study by Conn and Yesner, where involvement by hepatic metastases was ‘minimal’, double liver biopsy using a Vim-Silverman needle yielded positive results in only 20% of cases. In a small personal series of cases of metastatic liver carcinoma corresponding to Conn and Yesner’s ‘minimal’ involvement group, ultrasound guided fine needle aspiration yielded positive results in 72% of cases (unpublished observations). The vast majority of false negatives occurred at the very beginning of the series. There were no false positives.

Clearly fine needle aspiration has a definite role to play in the diagnosis of malignancy, either alone, or in combination with large needle biopsy.

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References
2 Dickey JE, Haaga JR, Stellato TA, Schutz CL, Hau T.

Effect of sulphasalazine and its metabolites on the generation of reactive oxygen species

Sir,—I read with interest the above paper by Miyachi et al.,1 and I applaud the authors on their thoroughness, but I felt the paper overcomplicated the issue. Neutrophils only produce one reactive oxygen species and that is superoxide anion which is formed via the action of an oxidase enzyme which is present within their cell surface membrane.2 Hydrogen peroxide and the hydroxyl radical are not produced directly by the neutrophil, but as a result of further reactions which superoxide may participate in once generated (dismutation, Fenton and the Haber-Weiss reaction).3

Therefore, logically it would be expected that any agent which inhibits neutrophil superoxide production also inhibits hydroxyl and hydrogen peroxide production as they are dependent on the former. I therefore find it surprising that the authors show sulphasalazine as inhibiting neutrophil superoxide production but not affecting hydrogen peroxide or hydroxyl radical production, and likewise that 5 amino-salicylic acid (5-ASA) inhibits hydrogen peroxide and hydroxyl radical generation but does not affect superoxide production. Although the latter could be explained by postulating that 5-ASA interferes with the reactions that occur after superoxide release.

It has recently been shown that sulphasalazine at a concentration of 1 mM will inhibit the formyl peptide (F-MetLeuPhe) induced stimulation of neutrophil superoxide release, but not 4 β-horborol 12 myristate 13-acetate (PMA) induced stimulation of superoxide production.4 Implying that sulphasalazine is exerting its inhibitory effect at the level of the neutrophil