LETTERS TO THE EDITOR

Soluble TNF receptors as prognostic factors for mortality

EDITORS,—We read with interest the paper by Berendsen et al. (Gut 1996; 38: 560–5) describing their investigations of systemic tumour necrosis factor (TNF) and soluble TNF receptor (sTNF) concentrations in mice with biliary obstruction. Endotoxaemia has been demonstrated frequently in both clinical and experimental biliary obstruction. It is probably responsible for much of the morbidity and mortality seen in jaundiced patients1 and exerts these effects by stimulating the release of TNF by monocytes in jaundiced patients.2 Soluble TNF receptors are released during Gram negative sepsis and in response to endotoxin and TNF.3 The findings of Beremelms and colleagues, of systemic concentrations of both TNF and sTNF in mice with biliary obstruction, support the hypothesis suggesting that TNF is an important mediator in the systemic inflammatory response to endotoxin in the biliary system.

Bemelmans et al. found that systemic TNF and sTNF concentrations were increased following surgical trauma and that only sTNF concentrations correlated with subsequent mortality. These results suggest that the sTNF concentration may be a better indicator of ongoing inflammation and a more accurate predictor of outcome than TNF. In patients with inflammatory bowel disease and acute pancreatitis,4 plasma sTNF concentrations correlated better with disease activity than measurements of TNF. Soluble TNF receptor concentrations were increased in patients with rheumatoid arthritis and chronic obstructive pulmonary disease.5 The difference between TNF and sTNF may result from the longer plasma half life of sTNF and biological inactivation of some detectable systemic TNF.

On the basis of this evidence it was reasonable to expect that administration of TNF antibody would improve outcome in animals with biliary obstruction undergoing surgery. The reason for the failure of TNF antibody treatment to reduce systemic sTNF concentration or mortality, despite reducing TNF concentrations, is unclear. The results were derived from blood samples taken eight and a half hours after administration of the antibody, and it is possible that further samples at 31 hours or later would have shown a reduction in the sTNF concentrations. It is interesting that TNF antibody administration has recently been shown to reduce disease activity in patients with inflammatory bowel disease in an uncontrolled study and in a randomized controlled trial.6 Clearly further study of sTNF and the use of anti-TNF antibody in clinical and experimental obstructive jaundice is indicated to elucidate the relationship among clinical features, cytokine activation and therapeutic intervention.


Heliobacter pylori and ulcer healing

EDITORS,—Bianchi Porro et al (Gut 1996; 39: 22–6) conclude that eradication of Heliobacter pylori does not confer any significant advantage on the healing of gastric and duodenal ulcers associated with long term use of non-steroidal anti-inflammatory drugs (NSAIDs). It is questionable, however, whether they have truly shown this in their study.

In the study, H pylori positive patients with NSAID related peptic ulcers were randomised to treatment with either omeprazole plus amoxicillin or omeprazole alone. Although it is not reported, it might be assumed that characteristics such as sex, smoking status, and dose and nature of the NSAID ingested were similar in both treatment groups. Of the 36 subjects who received omeprazole and amoxicillin, only 20 (56%) were cleared of H pylori infection. Comparing the healing rates in only these 20 subjects with the rates in those where H pylori persisted suggests that the purpose of the randomisation and raises the possibility that confounding factors explain the failure to observe a difference in healing rates.

Analysing the results on an intention to treat basis would allow a conclusion to be made as to whether the pylori positive subjects with omeprazole and amoxicillin was associated with a difference in ulcer healing rate. An intention to treat analysis would not, however, permit us to be made regarding the effect of H pylori eradication given that eradication was only successful in 56% of patients.

Similarly, the analyses of ulcer recurrence rates need to be interpreted with caution given that it is unclear whether the groups involved were matched for confounding factors, such as those listed above, which have been reported to be risk factors for NSAID related peptic ulcer disease.12