Correspondence

Potential hazards of intraoperative cholangiography in patients with infected bile

SIR,—I write to comment on this interesting article by N J Lygidakis (*Gut* 1982; 23: 1015–8). I do not feel that the suggested conclusions drawn from the study are substantiated by the facts presented. Firstly, the trial had a totally non-randomised selection method thereby not allowing true comparability between the groups. Secondly, the post-operative bacteraemia incidence is higher in the group who received the uncontrolled pressure cholangiography. It is stated that in this group the 'injection pressure was high'. There is no mention in the article of any pressure measurements being undertaken in this group. Were the pressures recorded or is it just an assumption that the pressure was high?

The value of any prophylactic antibiotic regime is that it results in therapeutic drug levels in the tissues and circulation at the time when bacteria are inoculated into the operation site. That 80% of the organisms isolated on blood cultures were sensitive to the combination of antibiotics used surely indicates that insufficient drug was present in the blood at that time. This is a failure of the dosage and timing of administration, not the drugs themselves.

Despite these criticisms the article raises the important question of pressure at cholangiography, but surely firm conclusions can only be drawn from a randomised trial with pressure measurements recorded in each group.

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SIR,—The article by Lygidakis (*Gut* 1982; 23: 1015–8) concludes that all on table cholangiography should be done under manometric control to reduce septic complications even if prophylactic antibiotics have been used. In the study of Strachan and his colleagues,¹ however, all the patients had on table cholangiography and in the group given one preoperative dose of cephazolin only 3.2% developed wound sepsis and in his total of 214 patients studied, 65 of whom received no antibiotics, there were no deaths and no intraperitoneal sepsis. There were no jaundiced patients in Strachan's

study compared with 49 of the 194 patients in Lygidakis's study. Most jaundiced patients, however, have their ductal system visualised during preoperative investigations to elicit the cause of the bile duct obstruction and consequently they do not need on table cholangiography.

The dose of gentamicin used by Lygidakis would not have procured adequate serum concentrations in many of his patients although the dose of ampicillin was adequate. The timing of the doses though may have been inappropriate. It is of no benefit and undesirable to start prophylactic antibiotics 12 hours before surgery and unnecessary to continue them for five days.¹ Furthermore, in the Lygidakis study anaerobes comprised 20% of isolates from the bile, an unusual finding,² and *B fragilis* was isolated from the blood of the two patients who died. The antibiotics used were inappropriate to provide prophylaxis against anaerobic flora.

We do not believe, therefore, that Lygidakis's report should induce surgeons to routinely undertake manometric surveillance of on table cholangiography. We would suggest that the author should follow the basic tenets of antibiotic prophylaxis and use adequate doses of an antibiotic appropriate to the bacterial flora given peri-operatively only.

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References

- 1 Strachan CJL, Black J, Powis SJA *et al.* Prophylactic use of cephazolin against wound sepsis after cholecystectomy. *Br Med J* 1977; 1: 1254–6.
- 2 Keighley MRB, Burdon DW. *Antimicrobial prophylaxis in surgery*. London: Pitman, 1979: 71.

Books

Stomas (*Clinics in gastroenterology*) Edited by B N Brooke, K F Jeter, and I P Todd. (Pp. 435; illustrated; £10.75). Eastbourne, Sussex: Saunders, 1982.

The creation and the management of intestinal stomas has long been one of the Cinderella subjects of surgery. Outside the specialist centres where many stomas are created, recreated, and revised,