

Correspondence

Serological markers in fulminant hepatitis B

SIR,—We were surprised that the interesting study of serological markers in fulminant hepatitis from King's College Hospital¹ did not mention the possibility of delta infection in some patients.

Delta hepatitis is more likely to result in fulminant hepatic failure than ordinary hepatitis B, as some of the authors have themselves described elsewhere.² In this unit, one third of patients with HBsAg positive fulminant hepatitis have serological markers of acute delta infection,³ and the majority of cases of fulminant delta hepatitis occur in conjunction with acute hepatitis B, as witnessed by positive hepatitis B core IgM tests, rather than in chronic hepatitis B virus (HBV) infection.

Although the delta agent requires the presence of HBV to establish itself, it subsequently suppresses the production of HBV markers. This has been best observed in chronic HBV infection complicated by superinfection with delta, both in man^{4,5} and in chimpanzees.⁶ It is uncertain what happens to HBV replication in acute HBV with delta infection. Patients with acute delta hepatitis are invariably HBsAg positive but the effect of simultaneous delta infection on the level and persistence of markers of acute HBV infection has, as far as we are aware, not been studied. It would be of interest to screen all the patients with fulminant hepatitis described by Gimson *et al*¹ for markers of acute delta infection, including those who at presentation were already anti-HBs positive.

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References

- 1 Gimson AES, Tedder RS, White YS, Eddleston ALWF, Williams R. Serological markers in fulminant hepatitis B. *Gut* 1983; **24**: 615–7.
- 2 Smedile A, Farci P, Verme G *et al*. Influence of delta infection on severity of hepatitis B. *Lancet* 1982; **2**: 945–7.
- 3 Govindarajan S, Chin K, Redeker AG, Peters RL. Fulminant B viral hepatitis: role of delta agent. *Gastroenterology*. 1984 (In press.)
- 4 Moestrup T, Hansson BG, Widell A, Nordenfelt E. Clinical aspects of delta infection. *Br Med J* 1983; **286**: 87–90.

- 5 Frommel D, Allain JP, Courouge AM, Derose S, Trepo D, Crivelli O, Rizzetto M. Long-lasting abatement of HBsAg synthesis induced by acute delta infection. *Lancet* 1983; **1**: 656–7.
- 6 Rizzetto M, Canese MG, Gerin JL, London WT, Sly DL, Purcell RH. Transmission of the hepatitis B virus-associated delta antigen to chimpanzees. *J Infect Dis* 1980; **141**: 590–602.

Reply

SIR,—We thank Drs De Cock, Govindarajan, and Redeker for their interest in our paper. At the time of study of these sera an assay for markers of delta infection was not available. Subsequent serological analysis by Dr M Rizzetto revealed that all the patients in this series were negative for delta antigen and antibody.

In a further analysis of 45 patients (18 of whom were reported in the paper by Smedile *et al*¹ and all of whom were IgM anticore positive, seven (19.4%) of 36 HBsAg positive cases had delta markers, whereas one (11.1%) of nine HBsAg negative cases showed evidence of delta infection. We have seen fulminant hepatic failure in three patients who were HBsAg positive but IgM anticore negative and two of these showed evidence of delta infection.

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Reference

- 1 Smedile A, Farci P, Verme G *et al*. The influence of delta infection on severity of hepatitis B. *Lancet* 1982; **2**: 945–7.

Book reviews

Current hepatology Vol 3 Edited by G L Gitnick. (Pp. 365; illustrated; £55.00.) New York: John Wiley, 1983.

I very much enjoyed volume 3 of *Current hepatology*. Firstly, the individual writers are good and, secondly, the topics are well chosen. Although it is perhaps invidious to pick out from such excellence, the chapter on cirrhosis by Galambos and Riepe is particularly useful in that it brings together information that is usually very widely