Mediators of vasopressin induced natriuresis in cirrhosis – possible role of atrial natriuretic factor

SIR.—Lenz et al (Gut 1989; 30: 90–6) recently reported increased natriuresis and diuresis in patients with cirrhosis and ascites after vasopressin infusion. The authors suggested suppression of sympathetic nervous system activity as an important mediator of the beneficial effects of vasopressin. Neither this nor other mechanisms discussed, however, could satisfactorily explain the observed improvement of renal function.

For further elucidation of the interesting results reported by Lenz et al, investigation of the atrial natriuretic factor (ANF) might be helpful. The role of this first well defined natriuretic hormone in volume retention of cirrhosis is being controversially discussed,1 with some authors reporting a relative deficiency of ANF plasma concentrations or impairment of ANF release in patients with cirrhosis and ascites.2 In rats, infusion of vasopressin has been shown to increase ANF plasma concentrations3 and ANF-induced natriuresis was found potentiated by vasopressin administration.4 Observations of an inhibition of vasopressin release by ANF5 lends further support to the contention that both hormonal systems are closely related. Thus, determination of ANF plasma concentrations might reveal ANF as a mediator of the vasopressin induced natriuresis in patients with cirrhosis and ascites.

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References
6 Fujio N, Ohashi M, Nawata H, et al. Alpha-human atrial natriuretic polypeptide reduces the plasma arginine vaso-

Reply

SIR,—We are grateful to Dr Dellipiani for his interesting comments.

The inflationary pressures that we use vary from 12 to 15 pounds per square inches (250 to 300 mmHg metric) which we believe are high pressures.

We have not used diazepam sedation because the pain that is usually seen with pneumatic dilatation, could be masked. We always perform radiological control of dilatation, however, and could therefore use diazepam.

Cooperative randomised studies are needed, but it will not be an easy task.

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