Reduced serum sulphation factor in malnourished children. D. B. Grant and B. L. Pimstone introduced by H. B. Valman. Clinical Research Centre, Northwick Park, Middlesex, and University of Cape Town Medical School, Cape Town.

Inhibition of deoxycholate-induced secretion of fluid in jejunum by mixed micellar solutions. S. P. Lamabadusuriya and J. T. Harries. Institute of Child Health, London W.C.1.

Deoxycholate, a secondary unconjugated dihydroxy bile salt, is produced by the bacterial degradation of primary trihydroxy bile salts. This dihydroxy bile salt may occur in the small intestinal lumen of man in conditions of bacterial overgrowth; it induces fluid secretion into the lumen, and has been implicated in the pathophysiological mechanisms responsible for certain types of infantile diarrhoea (Harries and Sladen, 1972).

We are currently investigating the influence of micellar solutions on the effects of deoxycholate on fluid and electrolyte transport in rat jejunum, using an *in vivo* closed-loop technique. Both 2.5 and 5 mmol/l. deoxycholate produced secretion of water, sodium, and chloride, and this effect persisted when the bile salt was solubilized in *pure* bile salt micelles (using 15 and 25 mmol/l. taurocholate).

Mixed taurocholate (15–20 mmol/l.) micelles containing 0.25, 0.75, and 10 mmol/l. oleic acid were prepared, and 2.5 mmol/l. deoxycholate was solubilized in each of the solutions. With increasing concentrations of oleic acid there was a concomitant reduction in the secretory effects of deoxycholate, and at 10 mmol/l. net absorption occurred in all the animals tested. Oleic acid (10 mmol/l.) emulsions had no effect on the secretory effects of deoxycholate.

These observations may indicate that the clinical effects of deoxycholate in man are dependent on its physicochemical state in the intestinal lumen, the efficiency of pancreatic lipolysis, and the amount and type of dietary fat.

REFERENCE

- Harries, J. T., and Sladen, G. E. (1972). The effects of different bile salts on the absorption of fluid, electrolytes, and monosaccharides in the small intestine of the rat *in vivo*. *Gut*, 13, 596.

Plasma nephelometry after oral fat loading in children with normal and abnormal jejunal morphology. M. F. Robards introduced by B. Wharton. Queen Elizabeth Hospital, Hackney, London.

A standardized oral fat load 1 g/kg body weight consisting of milk supplemented with double cream, cereals, and fruit was given to children having jejunal biopsy for suspected coeliac disease.

Venous blood was taken in the fasting state and at 2 and 3 hours after the breakfast. The light scattering intensity (LSI) of diluted plasma was measured in a micro-nephelometer. LSI of plasma is a function of the number of particles present and their size—thus mainly attributable to chylomicrons.

The rise in LSI from 0 to 2 hours was found to be significantly greater ($P < 0.001$) in the 22 patients with normal biopsy and the 8 patients assumed to be normal, than in 14 with subtotal villous atrophy (STVA). There was little overlap between the normal and abnormal groups. If only those children whose rise in LSI from 0 to 2 hours fell within the STVA range had been biopsied, 13 normal biopsies would have been avoided.

Microfiltration of the fasting plasma samples and remeasuring the LSI revealed that STVA patients had significantly higher fasting chylomicron levels ($0.005 < P < 0.01$) than normals.

The implications of these findings and of possible longitudinal studies with this method of screening for fat malabsorption was discussed.

Infant feeding practices and plasma osmolality. D. P. Davies introduced by O. P. Gray. Department of Child Health, The Welsh National School of Medicine, Cardiff.