

in patients with ileal resections (Weber *et al.*, 1976). The EHC is broken due to defective ileal reabsorption of bile salts. It has been suggested that unhydrolysed dietary triglycerides (Tg) impair the reabsorption of bile salts in the terminal ileum, but no definitive studies have examined this hypothesis.

This investigation studied the effects of Tg on taurocholate (TC) absorption (as judged by both luminal and mucosal disappearance of TC) in the terminal ileum of the rat utilizing a well validated *in vivo* closed-loop technique. The test solutions contained triolein 10 or 30 mmol/l, TC 10 mmol/l, oleic acid 1 mmol/l, monoglyceride 0.5 mmol/l, were made isotonic (280 mOsm/l) with sodium chloride, and were buffered to pH 7.1 with a sodium bicarbonate buffer; the control solution was identical except for the absence of triolein. Several paired experiments were performed using different absorptive periods up to 1 hour. Absorption of TC was linear up to 20 minutes, becoming curvilinear thereafter. Triolein had no effect on luminal or mucosal disappearance of TC at any of the absorptive periods tested. These results provide evidence that unhydrolysed Tg does not impair ileal reabsorption of bile salts. Further work is in progress to define the pathophysiology of bile salt malabsorption in CF.

Reference

Weber, A. M., Roy, C. C., Chartrand, L., Lepage, G., Dufour, O. L., Morin, C. L., and Lasalle, R. (1976). Relationship between bile acid malabsorption and pancreatic insufficiency in cystic fibrosis. *Gut*, **17**, 295-299.

Glucose stimulates fructose absorption: clinical implications in health and disease. P. J. Milla, D. P. R. Muller, and J. T. Harries. Institute of Child Health and The Hospital for Sick Children, Great Ormond Street, London WC1.

The disaccharide sucrose is composed of the two monosaccharides glucose and fructose, and the increasing dietary consumption of sucrose in the developed parts of the world has resulted in fructose becoming a major dietary constituent. Despite this there have been no systematic studies on the effects of glucose on fructose absorption. This study was prompted by our clinical impression that some infants with protracted diarrhoea absorb mixtures of glucose and fructose better than if either monosaccharide is presented alone.

The effects of glucose on fructose absorption have been investigated in the rat jejunum *in vivo*, using a steady-state perfusion technique. In addition, effects on fluid and electrolyte transport, and transmural potential difference (TPD), were simultaneously studied. Perfusion of mixtures of fructose (20 mmol/l) and glucose (2 mmol/l) resulted in a significant ($P < 0.001$) stimulation of net fructose transport, compared with values obtained when fructose was perfused alone. Higher concentrations of glucose (56 mmol/l) also stimulated fructose absorption but this was not statistically significant. The glucose-containing solutions induced large changes in TPD; when perfused alone fructose induced a small but significant increase in TPD. Perfusion of mixtures of fructose (20 mmol/l) and 3-*o*-methylglucose (2 mmol/l and 56 mmol/l) abolished the stimulation of net fructose transport. 3-*o*-methylglucose induced changes in TPD identical with glucose in equimolar concentrations. These results suggest that the stimulation of net fructose transport by glucose (2 mmol/l) may be related to cellular metabolism.

These studies indicate that glucose stimulates fructose absorption and may have important implications with regard to the dietary content of sucrose in health, and to the dietary management of diarrhoeal states in infancy.

Correction. In the April issue a review appeared on p. 340 of *The Child with Congenital Heart Disease after Surgery*. The publisher is Futura, Mt. Kisco, New York. The UK distributor is Wright, Bristol.