

excretion in the intestine. Fecal wet weight and energy excretion were also reduced. No participants withdrew from the study or died as a result of adverse events; however, jejunostomy nipple enlargement and lower-limb edema were the most commonly reported adverse events.

The authors conclude that their findings have significant clinical implications for patients with SBS, as teduglutide was well tolerated and intestinotrophic. They highlight the need for further investigation into teduglutide dosage and administration and note that a multi-center trial is now underway as a result of the encouraging findings of this study.

Katy Cherry

Original article Jeppesen PB *et al.* (2005) Teduglutide (ALX-0600), a dipeptidyl peptidase IV resistant glucagon-like peptide 2 analogue, improves intestinal function in short bowel syndrome patients. *Gut* 54: 1224–1231

Survival, and weaning off parenteral nutrition, in pediatric short-bowel syndrome

Pediatric short-bowel syndrome (SBS), the congenital or acquired loss of a significant portion of the small intestine, is associated with high morbidity and mortality rates, and limited conclusive evidence exists to predict the survival of such patients. Spencer and colleagues have therefore carried out a retrospective review of 80 pediatric SBS patients, ≤ 6 weeks of age, in order to determine the predictors of survival and weaning off parenteral nutrition.

In total, 22 of the 80 patients died and 51 were weaned off parenteral nutrition over the mean 5.1 years of follow-up. Cholestasis was found to be a strong predictor of death when conjugated bilirubin was $\geq 42.75 \mu\text{mol/l}$ (2.5 mg/dl). Absolute small-bowel length was only marginally predictive of survival; however, when taken as a percentage of the expected length for gestational age (to accommodate for the disparity in gestational age of the patients, as rapid increases in bowel length occur late in gestation) the length of remaining bowel is highly significant, and those with $< 10\%$ of that expected length had the poorest prognosis. In terms of weaning off parenteral nutrition, a small-bowel length $\geq 10\%$ of that expected was

predictive of success and those patients who had retained their ileocecal valve were also more likely to be weaned.

The authors conclude that these results allow for improved outcome prediction in pediatric SBS patients, in terms of survival and weaning from parenteral nutrition, which in turn might help clinicians to manage such patients.

Katy Cherry

Original article Spencer AU *et al.* (2005) Pediatric short-bowel syndrome: redefining predictors of success. *Ann Surg* 242: 403–412

A novel, catheter-free method for measuring intragastric pH

Research suggests that the acid environment of the proximal stomach is important in the pathogenesis of gastroesophageal reflux disease (GERD). Traditionally, gastric pH is monitored transnasally, but consistent catheter positioning is difficult, owing to migration and patient movements. The Bravo pH-monitoring system aims to overcome these limitations, by use of a wireless capsule fixed to the gastric mucosa during endoscopic visualization.

Two such capsules (one distal and one proximal to the squamocolumnar junction) were positioned in nine asymptomatic volunteers and nine symptomatic GERD patients. Successful placement and effective recording was achieved in 88% of subjects; data capture was around 98% in each position.

In this study, the acid environment in the gastric cardia was similar in both symptomatic and asymptomatic subjects and showed less meal-related buffering than is typical of more distal intragastric recordings, although this might be a reflection of sample size and the relatively mild GERD experienced by the symptomatic patients in this study. There was a trend for symptomatic subjects to show higher integrated acidity during the times that meals were normally consumed, and a significantly higher pH during reflux events, compared with asymptomatic individuals. Nadir gastric pH was almost always lower than nadir esophageal pH during reflux events, confirming earlier studies.

The authors conclude that the Bravo system permits 24 h gastric-cardiac monitoring with a number of advantages over conventional