

procedure. Previous animal studies have demonstrated the procedure's safety—this study used a pig model of short-bowel syndrome to assess the nutritional impact of STEP.

Ten young domestic pigs underwent bowel dilatation followed by removal of 90% of the small bowel. Five of these animals then underwent STEP in the same procedure. STEP-treated animals showed virtually no weight loss at 6 weeks postsurgery, compared with a mean weight loss of 17.6% for the five animals that did not undergo STEP. Compared with these controls, STEP-treated animals showed increased intestinal absorption of carbohydrates and fat, but a trend for increased zinc absorption did not reach statistical significance. None of the STEP-treated animals showed bacterial overgrowth, whereas four of the five control animals did. Interestingly, the STEP-treated animals also had higher levels of serum citrulline, a marker of viable intestinal mass; this might mean accelerated intestinal adaptation following STEP.

On the basis of these results, the authors recommend the use of STEP in children with short-bowel syndrome.

Katherine Sole

Original article Chang RW *et al.* (2006) Serial transverse enteroplasty enhances intestinal function in a model of short bowel syndrome. *Ann Surg* 243: 223–228

Decreased detoxification capacity in ulcerative colitis

Malignancies in the pouch mucosa have been reported following ileal-pouch–anal anastomosis, which is the most common surgical treatment for ulcerative colitis. The glutathione S-transferase (GST) family of enzymes of the gastrointestinal mucosal cells detoxify carcinogens and are thought to have an important role in cancer prevention.

A Dutch team has examined GST activity in the ileal pouch of 18 patients (15 men) with ulcerative colitis. All patients had previously undergone colectomy with ileal-pouch–anal anastomosis. In each patient, three biopsies were taken from the pouch mucosa and three were taken from normal mucosa in the afferent ileal limb. A significant decrease in the levels of GSTA1 and GSTA2 was observed in the pouch mucosa when compared with their levels in the normal ileal mucosa of the same patient ($P=0.02$). By contrast, the level of GSTP1 was

higher in the pouch mucosa than in the ileum. Overall, however, GST activity was significantly lower in the pouch mucosa than in the normal ileal mucosa ($P=0.008$). Ten patients were diagnosed with pouchitis (which has been suggested as a risk factor for malignancies), but neither GST activity nor levels correlated with its presence.

Previous studies of the risk of malignancies in the ileal pouch have yielded inconsistent results; nevertheless, the authors suggest that the decreased GST activity observed in the pouch mucosa of these patients indicates a lower detoxification capacity that might contribute to the risk of developing malignancies.

Katherine Sole

Original article Berkhout M *et al.* (2006) Low detoxification capacity in the ileal pouch mucosa of patients with ulcerative colitis. *Inflamm Bowel Dis* 12: 112–116

Doppler-guided hemorrhoidal artery ligation is effective in treating hemorrhoids

Hemorrhoidectomy is beneficial for some patients, although it is associated with the risk of postprocedural complications and pain. In this study, Greenberg *et al.* performed DOPPLER-GUIDED HEMORRHOIDAL ARTERY LIGATION (DGHAL) on 100 consecutive patients scheduled for surgical hemorrhoidectomy. Most patients had GOLIGHER GRADE III hemorrhoids; the rest had grade II. The outcome measures were symptomatic recurrence, postprocedure pain (measured by a VISUAL ANALOG SCALE), incidence of complications, and patient satisfaction at a 6-month and 12-month follow-up.

Most patients (95%) were discharged from hospital 2–4 h after DGHAL, and 93% required only local anesthesia during the procedure. Median operative time was 19 min (range 12–40 min). Mean pain score decreased from 2.1 (range 1.4–5.6) at 2 h postprocedure to 1.3 (range 0–2.4) on the first postprocedural day. All patients reported complete functional recovery by the third postprocedural day, and 85 of the 96 patients who completed 1-year follow-up were asymptomatic. Of the six patients requiring further treatment, four underwent surgical excision and two required rubber-band ligation.

Previously described disadvantages of DGHAL, including damage to the prostatic

GLOSSARY

DOPPLER-GUIDED HEMORRHOIDAL ARTERY LIGATION (DGHAL)

A procedure in which an anoscope with incorporated Doppler transducer is used to select branches of the superior hemorrhoidal artery, which are then tied off with sutures

GOLIGHER GRADE

A four-stage grading for internal hemorrhoids, from Grade I (bleeding hemorrhoids with no protrusion) to Grade IV (hemorrhoids with prolapse)

VISUAL ANALOG SCALE

A line anchored by word descriptors (e.g. 'no pain' and 'very severe pain') used to assess a characteristic that ranges across a continuum of values