Author's reply

Sir

We agree with Sudhindaran and Sinha that a randomized controlled prospective trial should be performed to examine the outcome of primary resection with and without on-table lavage and this would be best achieved in a centre dealing with a larger number of patients. As indicated in our paper we have been doing on-table lavage previously[1]. The obstructed colon usually contains gas, liquid and faecal matter which are easily removed via a 36-Fr tube. On-table lavage washes the colon surface clean of liquid residue rather than eliminating masses of solid faecal matter. There is evidence that complete cleaning of the colon of faecal matter is not necessary for ensuring anastomotic integrity[2,3]. None of our patients had perforation or synchronous lesions and, although seven had metastases, none had generalized peritoneal carcinomatosis. All patients had segmental resections and although the rectum was mobilized to facilitate resection and anastomosis in two patients the actual site of anastomosis was always above the peritoneal reflection. As indicated in the paper, there were no exclusion criteria and no exclusions. Long-term outcome was not part of this study since it did not seem relevant to the immediate surgical crisis.

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1 Naraynsingh V, Ariynanayagam DC. Obstructed left colon: one stage surgery in a developing country. *J R Coll Surg Edinb 1990*; **35:** 360–1.
2 Santos JCM Jr, Batista J, Sirimarco MT, Guimares AS, Levy CE. Prospective randomised trial of mechanical bowel preparation in patients undergoing elective colorectal surgery. *Br J Surg* 1994; **81:** 1673–6.
3 Irving AD, Scrimgeour D. Mechanical bowel preparation for colonic resection and anastomosis. *Br J Surg* 1987; **74:** 580–1.

Evaluation of pylorus-preserving pancreatoduodenectomy with the Imanaga reconstruction by hepatobiliary and gastrointestinal dual scintigraphy

Sir

I was interested to read the excellent article by Hishinuma (*Br J Surg* 1999; **86**: 1306–11) in which they evaluate the results of the Imanaga reconstruction following pylorus-preserving pancreatoduodenectomy. Having used this technique I have two comments.

As the first step in the gastrointestinal reconstruction they describe bringing the proximal jejunum through the transverse mesocolon. Unless the mesocolon has already been breached during dissection it is possible to use the normal anatomical route for the jejunal loop and clinically this appears to give an equally satisfactory result.

Since the Imanaga reconstruction restores the normal configuration of the upper gastrointestinal tract it is possible to use standard endoscopic stents for the biliary and pancreatic anastomoses. These can be removed endoscopically after a suitable interval following a plain abdominal radiograph in case spontaneous passage has already occurred.

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Author's reply

Sir

We thank Mr Lightwood for his interest in our paper. We do not raise the proximal jejunum via the normal anatomical route behind the superior mesenteric artery (SMA) in pylorus-preserving pancreatoduodenectomy with the Imanaga reconstruction technique (PPPD-Imanaga). In cancer of the pancreatic head, we routinely combine intraoperative radiotherapy (IORT) with PPPD-Imanaga. If the jejunal loop is brought through the normal anatomical route, fibrous adhesions around the SMA caused by IORT might restrict the motility of the jejunal loop. It is also possible that local recurrence around the root of the SMA due to perineural invasion (frequently observed after resection of pancreatic cancer) might provoke obstruction of the jejunal loop. Compression of the jejunal loop by the SMA itself might occur. These concerns led us to use the route through the transverse mesocolon. PPPD-Imanaga enables postoperative endoscopic observation of the status of the anastomoses. To perform such endoscopic observation easily we make the distances between the anastomoses as short as possible. We have had no experience with endoscopic stenting for biliary and pancreatic anastomoses but routinely check the patency of the pancreatic and biliary ducts by endoscopy at different times after surgery. In more than 90 per cent of patients we can identify the orifices of the pancreatic and bile ducts and usually perform retrograde pancreatography and cholangiography. Exocrine function of the remnant pancreas can be evaluated by observing the secretion of pancreatic juice. In one patient who developed pancreatitis endoscopic examination revealed severe stenosis of the orifice of the pancreatic duct and balloon dilation was successfully carried out. Endoscopic examination has revealed local recurrence around the pancreatic and biliary anastomoses in some patients and this reconstruction can therefore be recommended to allow early detection of local recurrence.

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