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An investigative technique to distinguish between the gastrojejunostomy and the hepaticojejunostomy as the cause of cholangitis following pancreaticoduodenectomy

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BACKGROUND

Pancreaticoduodenectomy is associated with a substantial post-operative morbidity and mortality of which sepsis accounts for one-third of complications.¹ A common cause of post-pancreaticoduodenectomy cholangitis is hepaticojejunostomy stricture.² However, if the gastrojejunostomy is formed too proximally on the Roux loop, for example following a Child reconstruction,³ then gastric contraction can cause reflux into the hepaticojejunostomy resulting in cholangitis. We describe a simple technique to detect reflux of gastric contents into the hepaticojejunostomy as the cause of post-pancreaticoduodenectomy cholangitis.

TECHNIQUE

Standard oral contrast mixture for a small bowel study (500 ml of a 50:50 mixture of Baritop 100 (100% barium w/v) with water and 10 ml Gastrograffin) is administered orally. Images are obtained with fluoroscopic screening with the patient supine. Intravenous erythromycin (1 g) is administered to stimulate gastric contraction. Contrast seen to reflux into the hepaticojejunostomy is suggestive that the gastrojejunostomy has been formed too proximally along the Roux-loop. Having excluded hepaticojejunostomy stricture with magnetic resonance cholangiopancreatography (MRCP), consideration should be given to revising the position of the gastrojejunostomy.

DISCUSSION

Investigations such as MRCP and percutaneous transhepatic cholangiogram can identify strictures at the hepaticojejunostomy but cannot demonstrate reflux of gastric contents into the biliary tree, which may occur if the positioning of the gastrojejunostomy is

too proximal. Our use of erythromycin to augment gastric emptying has demonstrated reflux into the biliary tree adding confidence to the diagnosis. This, in turn, gives greater confidence that reconstruction of the gastrojejunostomy will prevent recurrent episodes of cholangitis.

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A simple aid to improve patient positioning during percutaneous nephrolithotomy

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BACKGROUND

Percutaneous nephroscopic procedures are carried out with the patient in prone position. The optimal method of prone positioning for any surgical procedure is determined by the necessity of providing good operating field with minimal thoraco-abdominal compression and with patient's head in neutral position.¹ We describe our experience of using a mattress routinely used in spinal surgery, the 'Montreal' mattress (Teasdale Hospital Equipment, Manchester, UK) in performing percutaneous nephrolithotomy (PCNL).

TECHNIQUE

The 'Montreal' mattress (Fig. 1), which can be easily mounted on any operating table, is a rectangular mattress with a central hollow which helps to prevent compression of the abdomen during respiration and avoids interference with the venous return. It has a gutter at the head end to ensure mild flexion of the neck, assisting airway maintenance (Fig. 2). In our institution, we have used this mattress for positioning in 36 patients for PCNL without any complications and maintaining the pulmonary airway pressure below 30 cmH₂O.

DISCUSSION

During PCNL, the commonly used techniques of pillows or folded blankets placed under the iliac crests and chest leaving the