Technical Section [TECHNICAL NOTES AND TIPS

Staple line integrity test in sleeve gastrectomy

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The methylene blue dye leak test is considered established practice in laparoscopic Roux-en-Y gastric bypass.^{1,2} Laparoscopic sleeve gastrectomy is rising in popularity. Dye is delivered via an orogastric tube, with an instrument placed across the gastrectomy sleeve, preventing passage to the pylorus. Most standard laparoscopic instruments cannot compress the sleeve adequately. We use the partially closed endoscopic linear stapler, with the discarded cartridge, previously used in the longitudinal gastrectomy. At 60 mm, it gives good compression across the length to occlude the stomach beyond the inferior end of the staple line. It is safe, effective, readily available and adds no further cost.

References

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Reduced port number in laparoscopic cholecystectomy for acute cholecystitis following percutaneous transhepatic gallbladder drainage

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BACKGROUND

Laparoscopic cholecystectomy is a routine surgical procedure to treat patients with acute cholecystitis. Those with complications due to acute cholecystitis are usually unsuitable for emergency laparoscopic cholecystectomy because of sepsis and various co-morbidities. Percutaneous transhepatic gallbladder drainage (PTGBD) is an interim strategy for stabilising the patient.¹ However, in laparoscopic

Figure 1 The pigtail catheter is left in situ.

Figure 2 The pigtail catheter is pulled to lift the gallbladder fundus.

cholecystectomy following PTGBD, surgeons still face challenges such as tissue adhesion and hardness; as a result, a standard four-port laparoscopic cholecystectomy is necessary. The lateral right subcostal port functions as a gallbladder fundus retractor, which facilitates the Calot's triangle dissection. Some innovative techniques have been developed to replace the fourth port in uncomplicated gallstone disease cases.^{2,3} We describe a novel technique of using a PTGBD pigtail catheter as a gallbladder fundus retractor in acute cholecystitis.

TECHNIQUE

Laparoscopic cholecystectomy is usually scheduled three weeks following PTGBD. An 8Fr pigtail catheter (Skater™ drainage catheter with locking pigtail; Argon, Plano, TX, US) is left in situ and not removed (Fig 1). As carbon dioxide pneumoperitoneum is established via the

Figure 3 The curved catheter tip and thread act as an anchor for the liver.

umbilical port, and the epigastric and medial right subcostal ports are created, the pigtail catheter is pulled upwards to act as the fourth port to lift the gallbladder fundus (Fig 2). This technique facilitates the dissection of Calot's triangle and achieves satisfactory haemostasis. After gallbladder removal, the curved catheter tip and thread can be seen well fixed in the liver bed and serving as an anchor (Fig 3).

DISCUSSION

This technique can reduce the number of ports used in laparoscopic cholecystectomy following PTGBD in patients with acute cholecystitis.

References

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Assessing the amount of distraction needed for expandable anterior column cages in the cervical spine

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Background

Anterior cervical cages are used to reconstruct the cervical spine when a whole vertebral body needs to be resected. This is most commonly

Figure 1 Sagittal T2-weighted magnetic resonance image showing C4 fracture and collapse due to tumour, with spinal cord compression and focal kyphosis. The vertebral body is unable to transmit mechanical load and requires removal to decompress the spinal cord.

performed for spinal tumours or trauma where the vertebral body is fractured and unable to transmit mechanical load (Fig 1) or in cervical spondylotic myelopathy, where removal is required to achieve an adequate spinal cord decompression. It can be difficult to know how much to expand the cage following placement to ensure implant stability (so that it does not dislodge), balanced with the risks of over-distraction, which can cause end-plate damage to adjacent vertebrae, neurological injury or displacement of the facets posteriorly, with instability and pain.

Technique

The adjacent, normal cervical motion segment height above or below the corpectomy site (which encompasses the disc space-vertebral body-disc space height) can be measured (Fig 2). A smaller cage can be chosen, inserted and expanded until it reaches this length (Fig 3). The distraction length can be measured formally using a measurement device on the radiology images themselves. Alternatively, more crudely, place a piece of A4-sized paper on the image intensifier and mark two lines on the paper depicting this height, then compare with the corpectomy site height after sequential expansions of the cage.

Discussion

Using this technique, which can be performed intraoperatively using an image intensifier or preoperatively on computed tomography, we have found secure placement of the cage, without over-distraction, can