Case selection

Body mass index (BMI) below 30 kg/m² is best. Due to increased distance from the umbilicus to the gallbladder, long bariatric instruments are required in patients with high BMI.

Positioning

Modified Lloyd Davis allows surgeon and assistant to work together allowing full range of movement. Surgeon should be positioned between the legs with assistant sitting on the left side.

Avoidance of instrument crowding

A long 5-mm 30° scope occupies less space in the port and positions assistant away from the surgeon. Instruments of varying lengths prevent surgeon's right and left hand from colliding.

Triangulation

The left- and right-hand instruments naturally cross at the single point of entry to the peritoneal cavity; therefore, the surgeon must remember that their left hand is operating the instrument on the right side of the screen.

Retraction

Placing a suture on a straight needle through the abdominal wall, passing through the fundus or Hartmann's pouch in case of thickened and non-compliant gallbladder provides additional retraction. In case of difficulty or unclear anatomy, additional ports should be used or convert to a standard laparoscopic operation.

DISCUSSION

Single-port, 'scarless' cholecystectomy is safe provided basic principles are adhered to. Conversion to conventional laparoscopy is easy and patients must be consented for this.

The use of dental wire to facilitate tendon passing through the pulley mechanism

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BACKGROUND

Permanent division of flexor tendons in the hand is associated with significant morbidity. They are, therefore, usually repaired or reconstructed; in doing so, they must be passed under the pulley

Figure 1 Dental wire passed through the pulley.

Figure 2 Withdrawal of dental wire.

Figure 3 Proximal tendon and core suture has passed through the pulley.

mechanism to prevent bow-stringing. Careful handling of the tendon is needed to avoid crush injury and handling with clamps, clips or forceps is best avoided. Consequently, a number 8 paediatric feeding catheter is traditionally used. The catheter is passed from the distal to proximal under the pulley, sown to the tendon and then withdrawn so that the tendon passes under the pulley. The catheter then has to be removed from the tendon end leading to trauma whilst this lengthy process increases the tourniquet time. We propose the use of dental wire as a cheap alternative that prevents such complications.

TECHNIQUE

A core suture is made through the proximal tendon in the standard manner. A length of dental wire is curved around to make a U-shaped tip, passed under the tendon pulley and the core suture

threads are fed through the U at the tip (Fig. 1). The wire is then withdrawn (Fig. 2) pulling both the core suture and tendon with it (Fig. 3).

DISCUSSION

Dental wire is cheap and readily available. It is strong, flexible and thin, thereby providing the ideal mechanical properties to allow it to pass through the pulley system and bring the tendon with it on withdrawal.

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A novel technique for biliary T-tube fixation

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BACKGROUND

T-tube placement following bile duct exploration remains commonplace.¹ Displacement of the tube prior to planned removal can result in significant morbidity and even mortality.² Since T-tubes are often left *in situ* for an extended period of time,³ appropriate fixation is paramount. The physical properties of latex mean that adequate fixation is difficult to achieve. Overly tight retaining sutures can result in luminal obliteration impeding bile drainage, with too lax a ligature precipitating T-tube displacement. We describe a novel method of T-tube fixation that provides security whilst maintaining luminal integrity of the T-tube.

TECHNIQUE

Once the draining limb of the T-tube is brought out through the skin, a 1-cm segment length is removed from its free end. This short segment is placed over an artery clip and stretched to increase the luminal diameter. This dilated segment is then fed over the remainder of the draining limb until it is flush with the skin. This provides a cuff which presents an anchoring point for suture fixation without narrowing the tube lumen. Two sutures are then placed around the cuff and tied onto the skin. Further T-tube security is provided by coiling the tube under a clear dressing, which may prevent displacement following inadvertent traction.

Figure 1 Segment of tubing dilated with an artery clip being fed over the T-tube. The image was taken using a surgical simulation latex skin.

Figure 2 Sutured cuff *in situ* – the retaining sutures are visible beneath the cuff. The image was taken using a surgical simulation latex skin.

DISCUSSION

The fixation of a biliary T-tube would seem a simple task; however, many methods fail to provide safe anchoring while still allowing the tube to function correctly. This method of tube fixation helps to minimise the risk of T-tube displacement or blockage.

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Safe and re-usable splinting for hand surgery

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BACKGROUND

The incidence of complications, particularly wound infections,