Technical Section

TECHNICAL NOTES & TIPS

TECHNICAL NOTES

Clipless technique of laparoscopic cholecystectomy using the harmonic scalpel

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BACKGROUND

The technique of laparoscopic cholecystectomy still has areas requiring refinement, including complications of clips being dislodged. The use of the ultrasonically activated scalpel for tissue cutting and coagulation is a potential replacement for electrosurgery, which can be related to different complications. The harmonic scalpel was previously used for the division of the cystic artery and liver-bed dissection. Recent advances in harmonic scalpel technology now provide safe division and closure of the cystic duct up to 6 mm in diameter.¹⁻⁵

TECHNIQUE

This was a prospective study of 22 patients undergoing laparoscopic cholecystectomy using the harmonic scalpel. The harmonic scalpel was used as the sole instrument for division of the cystic duct and artery as well as dissection of the liver bed. The average age of the patients was 42.5 years (range, 22–61 years) with 5 males and 17 females. The average operation time was 34 min. The average postoperative in-patient stay was 7.2 h (all discharged on the same day of surgery). No patients developed postoperative haemorrhage or bile leakage.

DISCUSSION

The harmonic scalpel provided complete haemobiliary stasis for all patients in this study. However, we would not recommend division of the cystic duct of greater than 6 mm in diameter; in cystic ducts greater than this, an alternative ligature or clip technique should be used. Furthermore, utilising a single disposable instrument rather than several disposable instruments coupled with reduced in-patient stay may have cost-saving implications.

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Improvised urinary bladder irrigation system

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BACKGROUND

Urinary bladder irrigation is done in cases of both haematuria and as a part of any intervention in bladder and prostate such as transurethral prostatic resection and mensa irrigation.^{1,2} This is done using a 3-way irrigation urethral catheter. Usually, the size available is 16-Fr and above; however, in cases of stricture, a smaller size is required. We describe a technique for this situation.

TECHNIQUE

Materials required are a number 5 infant feeding tube, a 2-way Foley catheter, and anaesthetic lubrication jelly. Maintaining proper antisepsis, the urethra is lubricated with jelly and the infant feeding tube is introduced. A Foley catheter of required size is introduced and the balloon is inflated. The infant feeding tube is attached to the catheter by adhesive tape. Irrigation fluid is connected to the feeding tube. Using this technique, both

infant feeding tube and a '2-way Foley' of lesser calibre than the commercially available one are introduced simultaneously through the strictured urethra.

DISCUSSION

This technique provides a means of tiding patients over the situation of difficulty in introducing a standard 3-way catheter when bladder irrigation is required in cases of stricture.

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Bone grafting of the un-united docking site in bone transport: description of a percutaneous approach

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BACKGROUND

Non-union of the docking site is estimated to occur in up to 50% of bone transport cases. Bone grafting for such cases is traditionally done using a formal open approach, where the skin and periosteum are incised and elevated off the bone, the docking

Figure 1 The limited space between rings a and b and the poor soft tissues make an extensive open approach to the docking site extremely difficult.

Figure 2 (A) Non-union of docking site; (B) docking site post drilling; (C) docking site post insertion of bone graft dowel.

site is exposed, any fibrous tissue is removed, the bone ends are freshened and bone graft is packed in the remaining gap. Occasionally, such an extensive open approach is made technically difficult by the transport frame rings being too close or the soft tissues being too poor (Fig. 1) to allow extensive dissection. In such cases, a percutaneous approach is of value.

TECHNIQUE

A 2–3 cm skin incision is made at the level of the docking site and the periosteum is incised. Using a 6-mm drill or a Dynamic Hip screw reamer, 2–3 drill tunnels are made at the docking site. Initially, a vertical anterior–posterior drill hole is made. Further drill holes are made at an angle to this if, and as, needed. A corresponding number of bone graft dowels is harvested from the iliac crest using a percutaneous harvester kit. These are inserted and punched into the pre-drilled docking site and the soft tissues are closed (Fig. 2).

A new technique for removal of fractured locking screws from intramedullary nails

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BACKGROUND

Locking screw or bolt breakage in fractures treated by intramedullary nailing can cause difficulty in exchange nailing as the fractured screw may prevent nail extraction (Fig. 1a) resulting in a bigger incision, extensive soft tissue dissection and cortical disruption for its retrieval. Methods described to push out the