Reducing the risk of trocar site hernias

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Secondary tracheo-oesophageal puncture using an endotracheal tube

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BACKGROUND

Trocar site hernias (TSHs) can affect the outcome of laparoscopic surgery in 0.2–3.1% of cases.^{1–3} Factors influencing the development of TSHs include: the number and diameters of trocars; a peritoneal defect greater than the trocar size; midline insertion; the type of trocar tip; manipulation of the trocar site; methods of entry and closure; operative time; infection at the trocar site.^{3,4}

TSHs may have an early or late onset.² In early onset TSHs, viscera herniate through the peritoneal defect in the first few days after surgery. In late onset TSHs, the peritoneum remains intact and viscera herniate with the peritoneum. TSHs are usually asymptomatic. Occasionally, they can present with bowel obstruction that necessitates emergency surgery.

TECHNIQUE

We propose a simple and non-time consuming technique to repair fascial defects whenever they are indicated. Under direct reverse vision of the defect with a 30° laparoscopic camera, the measurement (using as a reference the size of the grasper branch [5mm]) can be undertaken readily. Alternatively, the size of the fascial defect can be measured directly using a sterile ruler. We suggest repair of fascial defects ≥ 8 mm independent of the trocar size used. Smaller defects have a very low prevalence of TSH and can be left in situ. We are aware that with our method of measurement we may repair more defects than is absolutely necessary.

DISCUSSION

Closure of the fascia for wounds >10 mm in diameter is essential.^{4,5} However, if the wounds are ≤ 10 mm in diameter, the decision regarding repair is controversial.¹ In fact, trocars that cause aponeurotic defects <10 mm in diameter rarely result in herniation or bowel obstruction.¹

References

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BACKGROUND

We describe a novel technique using an endotracheal tube to perform tracheo-oesophageal puncture in difficult patients.

TECHNIQUE

The endotracheal tube is sized according to the patient's oesophageal diameter. A 10mm window is cut in the anterior wall in the distal fifth of the endotracheal tube (Fig 1). The oesophagus is then cannulated with the endotracheal tube so that the prefashioned window lies against the posterior wall of the tracheal stoma at the site for the tracheo-oesophageal fistula, aided by inserting a fibreoptic nasendoscope. The Blom-Singer® valve (Forth Medical, Newbury, UK) is then inserted at the site for the puncture as guided by the light from the fibreoptic nasendoscope (Fig 2). In cases where this is technically difficult, a 12G Jacques catheter can be passed through the puncture site and through the oral cavity, and fixed to the other end, allowing maturation of the fistula.

Figure 1 Prefashioned window on anterior endotracheal tube wall

Figure 2 Use of the fiberoptic nasendoscope as a guide light for the puncture site

DISCUSSION

Secondary tracheo-oesophageal puncture following laryngectomy, as described by Singer and Blom, has a proven track record in providing voice rehabilitation.^{1–3} This technique has since been modified; the use of an endotracheal tube has been described previously by Maniglia and Cannon.^{4,5} The advantages of this technique are that it is useful in technically difficult patients, it allows direct visualisation of the oesophageal lumen during puncture and stenting of the distal oesophagus is possible. The equipment is readily available, and compared with a gastroscope, the flexible nasendoscope has a narrower diameter and is therefore easier to pass in a narrow oesophagus.

References

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A novel method for securing intraoperative nasopharyngeal suction

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None of the authors have any commercial interest in any of the products described in this technical note.

BACKGROUND

A clear operative field can be difficult to obtain during endonasal surgery. We describe a customised use of the AMT Bridle™ (Applied Medical Technology, Brecksville, OH, US) system,¹ marketed for nasogastric tube fixation, for securing an Argyle™ (Covidien, Dublin, Ireland) post-nasal space suction catheter (PNSSC), which has a valuable role in managing intraoperative bleeding.

TECHNIQUE

The nose is prepared using a topical local anaesthetic and vasoconstrictor. The AMT Bridle™ is inserted using the attached magnetic introducers and pulled through once magnetic union is achieved in the nasopharynx, leaving the tape slung behind the septum (Fig 1). A PNSSC is inserted and the position confirmed endoscopically (Figs 2 and 3). The catheter is secured externally with the provided clip (Fig 4).

Figure 1 Diagrammatic representation of technique for inserting AMT Bridle™ tape