Trocar injury of abdominal wall vessels: a simple method to stop the haemorrhage

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BACKGROUND

Misplaced laparoscopic ports can lead to brisk bleeding from traumatised abdominal wall vessels, with a reported incidence of 0.15%.¹ Significant blood loss may occur until definitive haemostasis is achieved. We describe a simple temporising measure to stop the bleeding, allowing a calm approach for a definitive repair.

Figure 1 Kii® GelPort® balloon trocar: internal balloon (A), external gel seal bolster (B)

TECHNIQUE

The original port is removed and a Kii® GelPort® balloon trocar (Applied Medical UK Ltd, London EC2N 1HQ) is introduced through the same incision. The internal balloon is inflated with air and the external gel seal bolster is locked tight against the skin surface (Fig 1). This unique port allows compression of the vessel against two static surfaces and leads to arrest of bleeding through direct compression. When the bleeding is under control, the vessel can be ligated by extracorporeal or intracorporeal suturing, open cut-down and ligation or more novel methods such as angiographic embolisation.²

DISCUSSION

Planned and careful trocar placement can reduce the incidence of this complication. It is therefore advisable to place lateral ports lateral to the rectus, visualise superficial vessels by transillumination of the skin and

deep vessels by direct laparoscopic inspection. Nevertheless, injuries to vessels do occur. This method affords you enough time to make a definitive repair without significant blood loss. An alternative would be to use the balloon of a Foley catheter; however, it will only allow compression against one surface and may not be as effective.

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How much neck extension would you require?

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BACKGROUND

Neck extension in an anaesthetised patient aids many head and neck surgical procedures and is traditionally achieved with a shoulder bolster. Unfortunately, once the patient is draped, any adjustment to extension involves lifting the patient to reposition the bolster, which is cumbersome and time consuming.

TECHNIQUE

An innovative way of adjusting neck extension is with a pressure infuser bag placed under the shoulder as part of initial patient positioning. The bag is then inflated using the attached handheld pump, which extends the neck to the required degree (Fig 1). Placing a padded sheet over the bag (eg an incontinence pad) is advised to reduce risk of fragile skin damage, particularly if greater inflation is required and for longer procedures.

Perioperatively, the degree of neck extension can be altered with minimum disruption by using the handheld pump to adjust the amount of inflation. We recommend that a periodic assessment of inflation is

Figure 1 Bag inflated using pump to provide required neck extension

carried out, especially during longer procedures, as it is acknowledged that infuser bags can leak. At the end of the procedure, the bag can be completely deflated to aid wound closure.

DISCUSSION

Using a pressure infuser bag to provide neck extension has been described previously in the context of intubating patients with difficult airways.¹ We have applied this technique to operative procedures of the neck, particularly thyroid and parathyroid surgery, and found that this innovative application is excellent at providing and adjusting neck extension with minimal patient manual handling and operative disruption.

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Utility of ultrasound in locating the linea semilunaris in the endoscopic component separation technique in ventral hernia repair

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BACKGROUND

Component separation techniques are being increasingly employed when repairing complex ventral hernias. They may be performed using open or endoscopic techniques. In the latter, determination of the location of the linea semilunaris is critical in placement of the initial trocar. Lateral displacement of the linea semilunaris due to the hernia makes the use of traditional landmarks challenging. This is especially pronounced in patients who are morbidly obese or have large hernias. Ultrasonography has the potential to overcome this challenge.

TECHNIQUE

A 7.5MHz transducer is used for the purpose. Scanning is started just lateral to the hernia defect in a plane at the level of the 11th rib. Scanning from a medial to lateral approach allows the edge of the rectus mus-

cle to be clearly made out. Scanning is then repeated at several points along the abdominal wall to trace the outline of the linea semilunaris (Fig 1). The initial trocar for an endoscopic component separation can then be made 2cm lateral to the linea semilunaris at the level of the 11th rib.

DISCUSSION

Distortion of the abdominal wall anatomy by the hernia may result in lateral displacement of the rectus, increasing the likelihood of placement of the initial trocar into the rectus and inadvertent dissection of the retrorectus space. This may result in significant bleeding, especially if the epigastric vessels are injured during balloon dissection of the space. Ultrasonography clearly identifies the location of the linea semilunaris and aids in the performance of the endoscopic component separation.

References

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The Oxford procedure for the treatment of lesser toe deformities

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BACKGROUND

This procedure has been developed to treat fixed flexion deformities at the proximal interphalangeal joint (PIPJ) without the complications associated with K-wire use.

TECHNIQUE

A dorsal elliptical incision is made over the PIPJ and deepened to expose the extensor tendon (Fig 1A). The tendon is divided transversely, leaving enough proximally to suture down onto the flexor tendon. Soft tissues including the collaterals are dissected free of the joint. The distal part of the proximal phalanx is exposed and resected with bone nibblers. Enough bone is removed to allow the flexion deformity to correct. The proximal end of the extensor is sutured onto the volar capsule, which is exposed following resection of the head (Fig 1B). The distal end of the extensor can be sutured back onto the dorsal part of the tendon proximally, restoring extensor function (Fig 1C). The skin is closed and adhesive tape applied. The toe is taped into position using half-inch tape. The patient continues to tape the toe daily for 2–3 months.

Figure 1 Transverse sonogram of the muscles and fascias at the linea semilunaris (arrow)