Figure 3

Figure 5

Figure 4

tension, and twisting the tongue depressor between the bars of the splint can be slow and cause pain. We describe a simple system of knots and pulleys, allowing effortless controlled straight-line traction to be used on Thomas splints.

TECHNIQUE

Skin traction is applied to the leg in the normal fashion. Rotation of the fracture is controlled by bringing the inner cord under the inner bar and back to the midline while the outer cord is brought over the outer bar and back to the midline (Fig 1). Two reef knots are placed with a gap between them to create a loop for later (Fig 2). One of the cords is used for pre-tensioning by attaching it to the end of the splint (Fig 3). The other end of the cord is brought over the end of the splint and then back through the loop created between the two reef knots and then back over the end of the splint and through the loop for a second time (Fig 4). This creates a pulley system and, by

pulling, the free cord creates tension effortlessly before securing it to the end of the splint (Fig 5).

DISCUSSION

The technique described allows effortless and controlled traction to be created when using a Thomas splint.

Reference

1. Robinson PM, O'Meara MJ. The Thomas splint: its origins and use in trauma. *J Bone Joint Surg Br* 2009; **91**: 540–544.

A novel transcutaneous ultrasonography guided single port removal of a pelvic appendicolith

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BACKGROUND

A retained appendicolith is a recognised complication following appendectomy. Unlike spilled gallstones, retained appendicoliths act inevitably as a nidus for recurrent intra-abdominal collections. Current options for treatment include image guided percutaneous drainage followed by surgical retrieval, with most reported cases eventually requiring open surgical drainage.¹ We present an innovative, less invasive approach for appendicolith extraction using existing laparoscopic instruments and ultrasonography guidance.

TECHNIQUE

Under general anaesthesia, ultrasonography is used to identify the appendicolith. A needle and syringe are used to enter the cavity

containing the appendicolith, and a guidewire is introduced. Sequentially larger dilators are passed over the guidewire to create a track capable of accommodating a 5mm blunt laparoscopic port. Under ultrasonography guidance, a laparoscopic sucker is used to extract the appendicolith via the port and irrigate the abscess cavity.

DISCUSSION

This minimally invasive technique was used to successfully treat a retained appendicolith and persistent intra-abdominal sepsis in a single patient following a laparoscopic appendectomy. Retained appendicoliths and their sequelae are often diagnosed in the first few weeks postoperatively when further open surgical exploration is most difficult. The use of ultrasonography guidance and laparoscopic instruments obviates the need for this. The port acted as a smooth conduit for the appendicolith to be extracted in. As an alternative to a laparoscopic sucker, a laparoscopic grasper or Dormia basket may also be used to extract the appendicolith. With ultrasonography expertise to guide the procedure, the authors advocate this technique as an option for the management of retained appendicoliths.

Reference

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An atraumatic muscle splitting incision for port placement prior to robotic assisted laparoscopic partial nephrectomy

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BACKGROUND

Robotic assisted laparoscopic partial nephrectomy through a transperitoneal approach requires strategically placed small incisions for insertion of the robotic ports. The camera port is placed through the rectus abdominis muscle above the umbilicus. We describe a technique for splitting the muscle with minimal trauma.

TECHNIQUE

The skin is incised along Langer's line over the belly of the rectus abdominis muscle. The anterior rectus sheath is incised transversely. The two margins of the sheath are anchored and ligated with a size 1 polyglactin suture on a J needle. These sutures are used subsequently to secure the camera port (Fig 1).

A Langenbeck retractor is advanced bluntly through the muscle, rotating the blade of the retractor to split the muscle fibres. A second Langenbeck retractor is 'spooned' over the first in the same split of the muscle fibres (Fig 2). This second retractor is now rotated through 180°; (Fig 3) and the retractors are pulled apart gently to expose the posterior rectus sheath (Fig 4). Forceps and scissors are

Figure 1 The anterior rectus sheath is incised and the margins are anchored with a suture.

Figure 2 A second Langenbeck retractor is 'spooned' over the first retractor.

Figure 3 The second Langenbeck retractor is rotated through 180°.