guide wire can simply be inserted before removing the catheter thereby allowing a new catheter to be rail-roaded over the guide wire again. If this is managed correctly, repeated flexible cystoscopy should not be required to re-introduce a guide wire every time the catheter needs to be changed.

References

1. Beaghtler M, Grasso 3rd M, Loisesides P. Inability to pass a urethral catheter: the bedside role of the flexible cystoscope. *Urology* 1994; **44**: 268–70.
2. Freid RM, Smith AD. The guidewire technique for overcoming urethral obstruction. *J Urol* 1997; **157**: 267–8.

An inexpensive ultrasound-guided central venous puncture simulator

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BACKGROUND

NICE guidelines state that 2-D ultrasound should now be used for the venous puncture step in the insertion of all internal jugular central venous catheters and considered in the placement of subclavian/femoral catheters.¹ Using ultrasound to locate and puncture the vein involves delicate operator co-ordination between the hand holding the needle and syringe, the hand holding the probe over the vein and the eyes watching the image on the screen of the portable ultrasound machine. These skills naturally take time to master. A simple, inexpensive simulator for ultrasound-guided venous puncture is presented which allows surgical trainees to practice their hand-eye co-ordination in

Figure 1 Simulated vein and artery lying side by side used in the model.

Figure 2 Advancing the needle towards the vein under ultrasound guidance.

locating and puncturing the vein before attempting the procedure under appropriate supervision in patients.

TECHNIQUE

The simulated vessels are constructed by cutting the finger portions from small latex gloves, filling them with water and tying a knot in the end. These are then glued together to lie side by side analogous to the anatomical arrangement of vein and artery. (Fig. 1). The 'vessels' are then placed in the bottom of a small kitchen storage tub. The tub is filled with standard lubricating jelly to simulate the surrounding tissues. A further glove is then placed around the tub and tied to ensure a good seal to stop leakage of the jelly. The 'vessels' cannot be seen through the glove looking into the model. In exactly the same fashion as performing the procedure in patients, the probe is placed on the top of the tub allowing visualisation of the simulated vein and artery below (Fig.

Figure 3 Ultrasound image of needle approaching simulated vein on model.

Figure 4 Ultrasound image of the author's internal jugular vein and common carotid artery.

2). One of the vessels is designated the simulated vein and selected as a target for puncture. The needle is then advanced towards the simulated vein (simV) and away from the simulated artery (simA) using ultrasound to monitor the progress of the needle through the surrounding tissues (Fig. 3). The ultrasound images of the simulated artery and vein obtained with the model are similar to those obtained in patients (Fig. 4). Puncture of the simulated vein corresponds with free water aspiration from inside the model into the syringe and loss of the ultrasound image of the vessel. The model can then easily be prepared for further use.

Reference

1. <http://www.nice.org.uk/pdf/Ultrasound_49_GUIDANCE.pdf>.

Closed cutaneous left iliac fossa mucus fistula after emergency subtotal colectomy

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BACKGROUND

Patients with ulcerative colitis often require an emergency subtotal colectomy with end ileostomy. Such individuals may be

Figure 1 Closed cutaneous left iliac fossa mucus fistula after emergency subtotal colectomy

septic and heavily immunosuppressed making management of the rectal stump problematic. If closed and left within the peritoneal cavity it can break down, resulting in pelvic sepsis. A safer alternative is to leave this as an open mucus fistula usually in the left iliac fossa (LIF). This facilitates localisation of the rectal stump if further surgery is contemplated but leaves the patient with two stomas and is poorly tolerated. A closed rectal stump sutured to the rectus sheath in the lower aspect of the midline wound has been advocated.¹ This avoided a troublesome mucus fistula routinely, but if dehiscence of the rectal stump occurred, allowed this to discharge into the wound, avoiding intra-abdominal sepsis. However, significant contamination may develop in the midline wound predisposing to wound disruption/dehiscence and slow healing. We propose the closed cutaneous LIF mucus fistula as a novel but preferable technique.

TECHNIQUE

A standard subtotal colectomy and end ileostomy is performed. The sigmoid colon is divided above the pelvic brim with a linear stapler, allowing enough length for the rectal stump to be brought to the surface via a left iliac fossa trephine. The staple line on the rectal stump is left intact and the skin is subsequently everted over this and secured to it with 3.0 Prolene sutures (Fig. 1). In most instances the staple line remains intact and the skin simply heals over it.

DISCUSSION

A closed cutaneous LIF mucus fistula has several advantages. If the staple line remains intact, patients are left with a single stoma (end ileostomy), a rectal stump that can be easily identified in the future and an intact, well-healed, midline wound. However, if the staple line breaks down, then this