visualise the bladder. As endoscopic technology evolved, the use of fluid became more common-place and air cystoscopy became outdated. One of the commonest uses of a cystoscope is for diagnosis and management of haematuria. Visualisation during cystoscopy may be impaired as the irrigation fluid becomes blood-stained and cloudy with the transmission of light diminished with increasing distention of the bladder. We have found that the use of air cystoscopy in these circumstances helps immensely in adequately visualising the whole of the bladder wall.

TECHNIQUE

The cystoscope is introduced urethrally in the conventional method. The bladder is initially inspected using irrigation fluid. The fluid is then drained from the bladder. Plastic tubing is then attached to the outflow of the cystoscope which, in turn, is connected to a 50-ml bladder syringe pre-filled with air. The bladder is then distended with up to 200 ml of air to allow adequate visualisation of the whole bladder. After thorough inspection of the bladder with air, irrigating fluid can be used to refill the bladder in order to proceed with further intervention if necessary.

DISCUSSION

In our experience, air cystoscopy produces a clear picture comparable to that seen using fluid cystoscopy (Fig. 1A,B). Air cystoscopy has the added advantage that the image is less likely to be distorted by bleeding. Although there is a theoretical risk of air embolus with this procedure,¹ there has been no documented evidence of this ever having occurred.^{2,3} Under the right circumstances, air cystoscopy can still play an important role in modern cystoscopic investigations.

References

- Schultheiss D, Machtens SA, Jonas U. Air cystoscopy: the history of an endoscopic technique from the late 19th century. *BJU Int* 1999; **83**: 571–7.
- Nicholson P. Problems encountered by early endoscopists. *Urology* 1982; **19**: 114–9.
- Reuter HJ, Reuter MA. *Philipp Bozzini and endoscopy in the 19th century*. Stuttgart: Max Nitze Museum, 1988.

Aesthetics: the groin crease incision for inguinal hernia repair in girls

ANTONINO MORABITO, ADRIAN BIANCHI
Royal Manchester Children's Hospital, Manchester, UK

CORRESPONDENCE TO

Antonio Morabito, Consultant Paediatrician and Neonatal Surgeon, Royal Manchester Children's Hospital, Hospital Road, Pendlebury, Manchester M27 4HA, UK
E: antonino.morabito@cmmc.nhs.uk

BACKGROUND

Inguinal hernia is one of the most frequent operations performed. More common in boys, patency of the processus vaginalis also

affects girls in whom it is bilateral in some 56% of cases. The advantages of the scrotal approach^{1,2} stimulated us to adapt the procedure for girls.

TECHNIQUE

A 1-cm incision is made in the natural skin crease between the medial thigh and the body, parallel to the vulva. Blunt dissection and upward medial retraction at the fascia plane and beneath the subcutaneous tissue, exposes the sac, the external inguinal ring, giving access to the inguinal canal. The hernia's contents are easily inspected and reduced. Outward tension on the sac allows the necessary high ligation and division of the patent processus. A wide external inguinal ring can be closed under direct vision.

DISCUSSION

Conventional inguinal herniotomy leaves a permanent inguinal scar. We consider 'groin crease herniotomy' to be an improvement on the conventional inguinal approach. It provides excellent unimpaired visual access to the sac and its contents, to the external inguinal ring and to the inguinal canal. Dissection is minimal and is undertaken in a relatively bloodless plane between the subcutaneous tissues and the muscle fascia. The approach is easy to teach and is rapidly learnt. The scar blends well into the natural creases between the medial thigh and the vulva, and does not suffer scar hypertrophy.

References

- Bianchi A, Squires BR. Transscrotal orchidopexy: orchidopexy revisited. *Pediatr Surg Int* 1989; **4**: 189–92.
- Iyer KR, Kumar V, Huddart SN, Bianchi A. The scrotal approach. *Pediatr Surg Int* 1995; **10**: 58–60.

Dislodging medial-sided soft tissue interposition in ankle fractures

D MAHADEVAN, B HOLROYD, CJP McALLEN
Department of Trauma and Orthopaedics, Plymouth Hospitals NHS Trust, Derriford Hospital, Plymouth, UK

CORRESPONDENCE TO

D Mahadevan, Department of Trauma and Orthopaedics, Plymouth Hospitals NHS Trust, Derriford Hospital, Derriford Road, Plymouth PL6 8DH, UK
E: m.deven@gmail.com

BACKGROUND

Weber B ankle fractures¹ associated with deltoid ligament rupture are unstable fractures. Signs of this injury are fibula fractures at the level of the syndesmosis with medial ankle tenderness and/or talar shift.² Failure to achieve anatomical reduction in these injuries significantly increases the risk of osteoarthritis.³ Occasionally, the restoration of the ankle mortise is impeded by

interposition capsule or ruptured deltoid ligament in the medial side of the ankle.⁴ Exploration of the medial side may be necessary to clear the medial joint space to allow satisfactory reduction. An effective technique is described to clear soft tissue off the medial joint space without the need for a separate incision, thus reducing the associated morbidities.

TECHNIQUE

Through a direct lateral approach over the fibula, the fracture is identified and then distracted by externally rotating the ankle. The fracture haematoma is curetted off the bone ends and periosteum removed from the edges of the fracture. The ankle joint is assessed directly through the distracted fracture site. The tip of a 20-ml syringe filled with normal saline is positioned in the tibiotalar joint. Saline is then flushed through this space towards the medial side of the ankle to dislodge the interposed soft tissue. The fibula fracture is then anatomically reduced and internally fixed. The mortice reduction should be evaluated on X-rays to ensure anatomical reduction.

DISCUSSION

The technique has also the added benefit of being able to clear any osteochondral fragments that may have arisen from the injury.

References

1. Weber BG, Colton C. Malleolar fractures. In: Muller ME, Allgower M, Schneider R, Willenegger H. (eds) *Manual of Internal Fixation*, 3rd edn. Berlin: Springer, 1991; 595–612.
2. Pankovich AM. Applications to ankle trauma and areas of future clinical research. In: Stiehl JB. (ed) *Inman's Joints of the Ankle*, 2nd edn. Baltimore, MD: Williams and Wilkins, 1991; 85–97.
3. Ramsey PL, Hamilton W. Changes in the tibiotalar area of contact caused by lateral talar shift. *J Bone Joint Surg Am* 1976; **58**: 356–7.
4. Coonrad RW, Bugg EI. Trapping of the posterior tibial tendon and interposition of soft tissue in severe fractures about the ankle joint. *J Bone Joint Surg Am* 1954; **36**: 744–50.

TECHNICAL TIPS

Put an end to Steinman pin sharps injuries

J GRANVILLE-CHAPMAN, J LOKE

Surgical Department, British Military Field Hospital, Iraq

CORRESPONDENCE TO

J Granville-Chapman, Building 390, DSTL Porton Down, Salisbury, Wiltshire SP4 0JQ, UK E: jgchapman@doctors.org.uk

Steinman pins are used for skeletal traction of femoral fractures. The pin is inserted into the proximal tibia; a stirrup is attached and the desired traction applied. The pin is inserted in the normal manner. Two shortened 1-ml syringes (with the plungers removed) cover the ends of the pin. The stirrup is placed and tightened. The blunt tips of the syringes cover the pin-ends (Fig. 1). Uncovered, the sharp ends of the pin present a risk injury to staff and patient. Our technique prevents injury, whilst obviating the need for messy tape or fiddly stoppers. It is quick, simple, cheap and secure.

Figure 1 Illustration of the proposed technique.