Lost 'swab' at inguinal hernioplasty under local anaesthesia

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ABSTRACT

Small surgical swabs should not be placed adjacent to polypropylene mesh prosthetics

KEYWORDS

Inguinal hernioplasty – Local anaesthesia – Swab – Polypropylene mesh prosthetic

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Surgery for inguinal hernia repair has been performed under every form of anaesthesia known to medicine. This is due to the fact that, with minimal handling of the hernial sac and its contents, the procedure is effectively body surface surgery. Clearly not all hernias need be repaired under local anaesthesia; nowadays, general anaesthesia has

no significant morbidity in young, fit patients. However, the anaesthetic employed when repairing a hernia should still be a consensus between patient, surgeon and anaesthetist, especially as the patient will usually not meet the anaesthetist until the day of surgery. Nevertheless, despite this, local anaesthesia is not used in the LTK as often as it

Figure 1 Close-up of plain radiograph clearly showing retained swab in right groin.

might be although there is good data to support its more wide-spread use.¹

Case report

A 69-year-old, hypertensive man with a right, direct inguinal hernia of 8 months' duration underwent a mesh plug and patch repair² under local anaesthesia (1% lignocaine with 1:200,000 adrenaline/0.5% bupivacaine). This was planned as a day-case. At operation, the prosthetic plug was inserted into the preperitoneal space and sutured in place. The operation seemed to proceed uneventfully thereafter but the swab count was incorrect on wound closure with the nurse insisting that a pledget ('peanut') swab was missing. The surgeon explored the inguinal canal and the wound thoroughly but, as no such swab could be found, closed the incision.

As the nurse was insistent that the count was correct at the start of the operation, the patient was X-rayed in the recovery room. The offending 'peanut' swab was easily identified (Fig. 1) and the patient duly returned to theatre. The anaesthetist, at this stage, had been called elsewhere; although we had drawn up further local, the second exploration needed no further local anaesthetic. The swab was found adherent to the dome of the pre-shaped mesh plug and had been inadvertently placed deep to the prosthesis in the preperitoneal space. It was easily removed and a second repair with a further new prosthesis carried out. At the end the patient, unprompted, stated that this operation (nearly 2 h after the first) had caused him no discomfort whatsoever. The patient was discharged 4 h later with a course of oral antibiotics. He was reviewed 3 weeks later when he was asymptomatic and the wound well healed.

Discussion

We have learnt a number of lessons from this seemingly simple error. The first is that the circulating scrub nurse is always right... until proven otherwise! Misadventure is not necessarily negligent and honesty, rather than masterly inactivity, is owed as a duty of care. Certainly, missed swabs still remain a burden to us all and not only because of the financial implications in our overly litigious society.³

Inguinal hernioplasty under local anaesthesia seems not to have 'caught on' in the UK⁴ despite many patients worldwide safely undergoing repair in this manner. Most can be discharged within a few hours with minimal discomfort.^{1,5-7} Had our patient had his repair performed under general anaesthesia, the second operation would certainly not have been as comfortable. Would we have been able to discharge him safely as a preplanned day-case? Indeed, this mishap has further convinced us of the immediate benefits, in terms of pain,⁸ of repairs carried out under local anaesthesia as we too had been initially sceptical of its value despite the volume

of published literature on the subject. Furthermore, this case is a robust example of the value of pre-emptive analgesia in groin herniorrhaphy.

Cultural factors clearly have a role to play in the choice of anaesthesia, with some patients expecting all surgery to be performed under a general whilst others have real problems with the perceived 'loss of control' that this entails. Is there a steep learning curve to attain success in performing repairs under a local? We did not find it so and it can be mastered with comparative ease.⁹ A 'lighter' surgical touch is certainly needed but this is no bad thing and one becomes proficient in its application after just a few cases.¹⁰ In addition, such repairs are associated with very few complications^{1,5-7,10,11} and a negligible risk of urinary retention.¹² Furthermore, the use of a local anaesthetic means that our older patients can mobilise and be discharged earlier.

Finally, should such small (< 1 cm³) pledgets still be used? We use them in an attempt to avoid damaging those thin veins which run along the inguinal ligament when mobilising the spermatic cord. We now ensure that they are kept away from the prosthesis, which like all polypropylene mesh has a degree of Velcro-like activity.

References

1. Kingsnorth AN, Bowley DMG, Porter C. A prospective study of 1,000 hernias: results from the Plymouth Hernia Service. *Ann R Coll Surg Engl* 2003; **85**: 18-20.
2. Goyal S, Abbasakoor F, Stephenson BM. Experience with the preperitoneal 'plug and patch' inguinal hernia repair. *Br J Surg* 1999; **86**: 1284-5.
3. Gawande AA, Studdert DM, Orav EJ, Brennan TA, Zinner MJ. Risk factors for retained instruments and sponges after surgery. *N Engl J Med* 2003; **348**: 229-35.
4. The Royal College of Surgeons of England. *Clinical guidelines for the management of groin hernias in adults*. London: RCSE, 1993.
5. Shulman AG, Amid PK, Lichtenstein IL. The safety of mesh repair for primary inguinal hernias: results of 3,019 operations from five diverse surgical sources. *Am Surg* 1992; **58**: 255-7.
6. Shulman AG, Amid PK, Lichtenstein IL. A survey of non-expert surgeons using the open tension-free mesh patch repair for primary inguinal hernias. *Int Surg* 1995; **80**: 35-6.
7. Zieren J, Hokschi B, Wenger FA, Opitz I, Muller JM. Inguinal hernia repair in the new millennium: plug and patch repair with local anaesthesia. *World J Surg* 2001; **25**: 138-41.
8. Tversky M, Cozacov C, Ayache M, Bradley EL, Kissin I. Postoperative pain after inguinal herniorrhaphy with different types of anaesthesia. *Anesth Analg* 1990; **70**: 29-35.
9. Amid PK, Shulman AG, Lichtenstein IL. Local anaesthesia for inguinal hernia repair: step-by-step procedure. *Ann Surg* 1994; **220**: 735-7.
10. Nordin P, Zetterstrom H, Gunnarsson U, Nilsson E. Local, regional, or general anaesthesia in groin hernia repair: multicentre randomised trial. *Lancet* 2003; **362**: 853-8.
11. Young DV. Comparison of local, spinal, and general anaesthesia for inguinal herniorrhaphy. *Am J Surg* 1987; **153**: 560-3.
12. Finley RK, Miller SF, Jones LM. Elimination of urinary retention following inguinal herniorrhaphy. *Am Surg* 1991; **57**: 486-8.