Letters and comments

Surgical safety

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In June 2008 the World Health Organization's Surgical Safety Checklist was released globally as part of the Safe Surgery Saves Lives initiative.¹ The original pilot study demonstrated that with the use of a checklist, surgical complications were reduced by more than a third.¹

Over the last year, the local trust has been implementing a trial using an alternative suture company. It was soon noted that the change in suture was not being altered on the operation note and, at times, that it was not known to the operating surgeon. Examples included the transfer of Vicryl® (an absorbable suture produced by Ethicon Inc) to Polysorb™ (an alternative suture with similar properties manufactured by Covidien). Over a period of 4 weeks we looked at 48 day case and inpatient operations in a single centre. An observation of the requested and used suture was compared with the suture documented on the operation note.

Of the 28 cases of deep tissue closure, 19 were documented incorrectly, 6 were documented accurately and 3 not at all. Of the 45 cases of skin closure, 32 were documented inaccurately, 12 documented accurately and 1 not at all. The overall accuracy of documenting the suture was 28%.

The results were fed back to the surgical consultants at our trust audit meeting. They were then offered six sutures (Monosyn®, Monocryl®, Polysorb™, Vicryl®, Prolene® and Surgipro® II) and asked if they could tell the difference between the matching pairs. Around 50% were able to tell the difference accurately.

This observational study highlighted a couple of important points. First, *Good Surgical Practice* states that we should give details of our closure techniques, which should include the name of the suture.² Second, were we to have any problems with our sutures, would there be any litigation if the operation notes are not documented accurately? Shouldn't each suture pack come with a sticker for the notes?

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Intraoperative red blood cell salvage and autologous transfusion during open radical retropubic prostatectomy

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COMMENT ON

Ubee S, Kumar M, Athmanathan N, Singh G, Vesey S. Intraoperative red blood cell salvage and autologous transfusion during open radical retropubic prostatectomy: a cost-benefit analysis. *Ann R Coll Surg Engl* 2011; **93**: 157–161

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We read with interest the work of Ubee *et al* and commend the authors for addressing the important issue of minimising perioperative homologous blood transfusions. We have used cell salvage in our department for all major urology cases and have regularly audited our results since 1996.¹ We agree with the authors' conclusions that cell salvage is safe and cost-effective. Furthermore, we feel that several important points should be emphasised.

First, in addition to acknowledged transfusion risks, homologous blood products are a precious diminishing resource. All methods to conserve blood should be actively employed. Knowledge and implementation of the threshold transfusion level of 7g/dl is essential in asymptomatic patients without comorbidity.

Second, although there is evidence to support the statement that the use of cell salvage does not affect oncological outcome, it is impossible to deduce this from the current series due to the fact that the time period and the duration of follow-up is not documented. Similarly, the reason for the shorter hospital stay is likely to be multifactorial in this consecutive series rather than due to cell salvage alone.

Third, with improved anatomical knowledge and the minimally invasive techniques of laparoscopic and robotic surgery becoming more prevalent, blood loss during radical prostatectomy has decreased considerably.² Although the ultimate surgical goal may be bloodless intervention, we are not there yet. The advantage of cell salvage is that there is a 'suck and save' option, where not all the consumables need to be opened unless a significant level of blood is lost intraoperatively. In our centre the cost of this is £25, thereby making cell salvage both cost-effective and a vital adjunct in major urology cases. Our current mean blood loss at open radical retropubic prostatectomy is 325ml and we find

that cell salvage is still financially viable, even setting aside other benefits.

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Minimising the risk of extensor pollicis longus rupture following volar plate fixation of distal radius fractures: a cadaveric study

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COMMENT ON

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I read the above article with a great deal of interest. Tendon attrition resulting from iatrogenic damage with either drills or screws during distal radial fracture fixation is of course a concern. I commend the authors for producing an insightful paper in a clinically relevant area, given the recent expansion in the proportion of distal radial fractures being aggressively treated with osteosynthesis.^{1,2} However, a number of concerns still exist.

Trying to predict which holes may present an increased risk of soft tissue damage is difficult and perhaps not as easily reproducible as suggested. This may be influenced by a number of factors including the precise implant position, screw width and screw length. Both the radial to ulnar and proximal to distal position of the plate may be altered depending on the fracture configuration, changing the position of the holes in relation to the extensor pollicis longus (EPL) tendon. In their cadaveric model, the authors used 1.6mm K-wires to assess EPL damage. The distal locking screws of the plates examined range from 2.3mm to 2.5mm. Would using the actual screws not have provided a more accurate picture of tendon injury? To avoid damage, the authors recommend leaving these centrally placed screw holes empty. This, however, may significantly compromise fracture stability, especially in the punch or coronal split fracture patterns.

Judging when the drill has penetrated the far cortex can be problematic, particularly with dorsal comminution. Drilling carefully with a finger underneath the dorsal lip of the radius provides adequate proprioceptive feedback to allow the surgeon to gauge the position of the drill tip accurately, avoiding soft tissue damage. Fluoroscopic assessment of

screw length, utilising views tangential to the radiocarpal surface in multiple planes, has been described to help with implant positioning and to avoid extensor compartment irritation.^{3,4}

With a rapidly expanding market of volar plating systems, including new fragment-specific polyaxial locking plates, the authors remind us of the importance of respecting the soft tissue envelope when treating this common orthopaedic injury.

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Stressing the need for rapid referral of complex open fractures to a specialist centre

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Guidelines from the British Orthopaedic Association and British Association of Plastic, Reconstructive and Aesthetic Surgeons recommend the immediate referral of complex open fractures of the lower limb to a specialist centre for combined orthopaedic and plastic surgical management.¹ However, Townley *et al* reported that across a large area of South-West England the mean delay in referral of open tibial fractures was 5.4 ± 1.7 days.²

Our institution is a regional referral centre providing free tissue transfer for a population of 3 million people. A 2-year retrospective audit of open fractures requiring soft tissue coverage ($n=22$) revealed a median referral delay of 3.5 days and there was no increase in the proportion of patients admitted directly to our centre (as opposed to having initial debridement $\pm$ fixation in a district hospital) following guideline introduction. Furthermore, the infection rate for indirect admissions was 33% compared with a reported rate of 3% when fixation and flap coverage are performed at the same sitting.³

With the establishment of regional trauma networks across the UK over the coming months,⁴ it is imperative that all surgeons dealing with open fractures are aware of the need for rapid referral and local mechanisms are in place to allow this to happen.