

Technique: Open reduction is achieved with large bone clamps. With this maintained, a cerclage wire passer is used to guide a heavy (5) absorbable suture around the shaft at the level of the fracture, where it is tied. This is repeated at intervals along the fracture. Thus the clamps can be released and the reduction maintained by the suture. This allows unhindered vision for the placement of the fixation device. Once the fixation device has been applied the suture material can be cut and the remnant suture pulled free of the fixation.

Discussion: This technique utilises inexpensive materials and basic trauma surgical skills. It aids the surgeon in maximising his visualisation of the fracture, achieving optimal exposure and time efficiency at this crucial stage of the operation. (257).

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A radiographic indicator of increased operative complexity in pelvic trauma surgery

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The accurate assessment of acetabular fractures is critical for planning operative intervention. Clinical and radiological factors predicting the outcome of such injuries are well documented and the most critical predictor of clinical success has been shown to be the accuracy of reduction. In cases of associated both column fractures, reduction and fixation can usually be achieved through the ilio-inguinal approach. These fractures form a distinct group such that all articular fracture fragments of the acetabulum are detached from the remaining intact portion of the ilium which remains attached to the sacrum. Recognition of these complex fractures is important as on occasions a single standard approach is insufficient for complete and accurate reduction and fixation of the fracture.

We demonstrate an important radiographic sign, namely the “Sciatic-U” sign which if present indicates a particularly complex both column fracture pattern. The “Sciatic-U” is visible on the antero-posterior pelvic radiograph in a rare subtype of both column fractures and is created by the greater sciatic notch fracture fragment rotating internally or externally. The “Sciatic-U” sign appears, as its name suggests, like a U-shape present above the acetabulum.

We describe 3 cases of both column fractures treated in a tertiary pelvic referral centre with the presence of this sign. In these cases a single approach for fracture reduction and fixation was used and was thus associated with great difficulty. Typically, through the ilio-inguinal approach the anterior column is reduced and internally fixed. The posterior column is then reduced through the middle window and includes reduction of the quadrilateral plate. With significant sciatic notch displacement proximal reconstruction is difficult as this reference point is lost. Also, biomechanically the entire construct hinges on this fixation point. This dictates the use of either 2 approaches (e.g. Kocher-Langenbeck plus ilio-inguinal) or an extended ilio-inguinal approach.

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Prophylactic antibiotics are used to reduce the infection risk in fracture surgery, but it is not always evidence-based. We present a review of the latest evidence and provide some recommendations.

A Cochrane systematic review of 22 trials and 8307 participants showed a reduction in deep wound infection with systemic antibiotics in osteosynthesis of closed fractures. A meta-analysis of 15 RCTs in hip fracture surgery showed a reduction in surgical site infections (SSI) with systemic antibiotics. A meta-analysis of seven RCTs and 3808 participants showed no superiority of multiple doses versus a single dose in osteosynthesis of closed fractures. A Cochrane systematic review confirmed this; as long as the agent used provides tissue levels exceeding the minimum inhibitory concentration (MIC) over a 12-h period. Antibiotics should be given 30 min before skin incision or tourniquet inflation to maximise their local effect. The antibiotic selected should cover the expected pathogens for that procedure; and only these pathogens need to be covered, therefore a relatively narrow spectrum antibiotic can be used as first line. The commonest pathogen infecting internal fixation devices is *Staphylococcus aureus* (SA) (over 40% of cases), followed by *Pseudomonas aeruginosa*. Coagulase negative *Staphylococcus* plays a lesser role than in joint arthroplasty infection. Antibiotic resistance is becoming increasingly common amongst organisms responsible for infection, especially SA. This makes the usual prophylactic agents (for example, cefuroxime) ineffective. MRSA carriage is associated with an increased risk of MRSA-SSI. The prevalence of MRSA carriage is higher in institutionalised patients. The majority of *staphylococcus aureus* are sensitive to flucloxacillin. Those that are resistant can be covered by gentamicin, which also covers *pseudomonas*. The best cover for MRSA at present remains vancomycin. Using a combination of antibiotics lessens the likelihood of developing resistance.

For osteosynthesis of closed fractures we suggest four doses of flucloxacillin in the first 24h with one dose of gentamicin at induction. In high risk patients for MRSA we suggest single doses of vancomycin and gentamicin at induction. It is essential that decisions for local antibiotic prophylaxis policies involve microbiologists and pharmacists, and should take in to account the commonly encountered pathogens, their sensitivities, and cost. Further research is needed to establish the effectiveness of new antibiotic prophylaxis regimes against those currently used, through well designed randomised controlled trials.

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A simple way to aid accurate guide wire placement in dynamic hip screw fixation for intertrochanteric fractures of the femur

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Introduction: The use of the dynamic hip screw is common practice for the fixation of intertrochanteric fractures of the femur. The success of this procedure requires accurate guide wire placement. This can prove difficult at times and can result in repeated attempts leading to longer operating time, multiple tracks and more importantly greater radiation exposure to both patient and operating staff. We hypothesised that rather than using the standard anterior-posterior projected image (Fig. 1) of a proximal femur, rotating the intensifier image (Fig. 2) so that the guide wire