

Correspondence

Circumferential wires as a supplement to intramedullary nailing in unstable trochanteric hip fractures

Sir—We have read the article by Ban et al. (2012) with great interest. We believe that the reported results are remarkable, however, we would like to point out some issues on AO 31A3 type intertrochanteric fractures.

The fractures were classified according to AO classification. 35 fractures were classified as AO 31A3 and 7 were AO 31A2. The authors claimed that multiple cerclage wiring provided anatomical reduction as well as rotational stability in these fracture types. Proximal femoral nail system alone provides enough stability for AO 31A3 fractures (Fogagnolo et al. 2004), however, the main problem in these type of fractures is the flexion, abduction and external rotation of the proximal fragment by the pull of iliopsoas and gluteus medius muscles. Because obtaining anatomical closed reduction and stability is difficult in AO 31A3 type reverse oblique unstable fractures, we believe that open reduction by a bone clamp as reported by Afsari et al. (2009) is a more appropriate surgical technique for better clinical results because this provides correct positioning of the guidewire on the greater trochanter. In a cadaveric study, Ostrum et al. (2005) reported variable degrees of gap formation at the fracture line with intramedullary fixation at different anatomical trochanteric entry points and they concluded that the accurate trochanteric entry point should be the anterior one third and posterior two third junction of the greater trochanter.

In the light of the above literature, we believe that anatomical open reduction of the fracture line by the help of a bone clamp and intramedullary fixation by a proximal femoral nail under fluoroscopy control with care for correct entry point is essential for stable fixation of AO 31A3 fractures but securing the fracture line with circumferential wires is unnecessary.

Serkan Akçay¹ and Ismail Safa Satoglu²

¹Department of Orthopaedics and Traumatology, Izmir Katip Çelebi University Atatürk Research and Training Hospital, Basinsitesi, Karabağlar/Izmir, 35360, Turkey.

²Department of Orthopaedics and Traumatology, Izmir Katip Çelebi University, School of Medicine, Turkey

Correspondence: Dr. Serkan Akçay, drserkan02@yahoo.com

Sir—Thank you for the interest in our work. We agree, it is of importance to get a correct entry point for nail insertion. In cases of AO 31 A3 fractures it is correct that displacement of the proximal fragment, caused by muscle pull, makes a correct entry difficult. In these cases a bone clamp can be used to reduce the fracture but, based on our experience, we prefer to secure the fracture reduction using a circumferential wire as the fracture tends to dislocate when the clamp is removed after nailing.

We agree that AO 31 A3 fractures can be treated with a proximal femoral nail alone but this may result in a fracture dislocation and restricted or no immediate weight bearing. The work by Fogagnolo et al. (2004) included only 5 AO 31 A3 fractures and less than half were allowed immediate weight bearing. This is, in our opinion, not sufficient proof that a nail alone provides enough stability. In our work we present 35 cases of AO 31 A3 and almost three quarters were allowed immediate postoperative weight bearing. We do not try to recommend routine use of circumferential wires in these fracture types as we do not compare fixation with and without wires in these fractures.

Our primary aim was to investigate whether circumferential wires had a detrimental effect, as is sometimes claimed. We believe that wires supplemental to intramedullary nails is an option especially as it seems to provide good primary reduction, which is maintained over time.

Ilija Ban

CORH: Clinical Orthopaedic Research Hvidovre, Department of Orthopaedics, Copenhagen University Hospital, Hvidovre, Denmark
Correspondence: ilija.ban@gmail.com

Afsari A, Liporace F, Lindvall E, Infante A Jr., Sagi H C, Haidukewych G J. Clamp-assisted reduction of high subtrochanteric fractures of the femur. *J Bone Joint Surg (Am)* 2009; 91 (8): 1913–8.

Ban I, Birkelund L, Palm H, Brix M, Troelsen A. Circumferential wires as a supplement to intramedullary nailing in unstable trochanteric hip fractures. *Acta Orthop* 2012; 83 (3): 240–3.

Fogagnolo F, Kfuri M Jr, Paccola C A. Intramedullary fixation of per-trochanteric hip fractures with the short AO-ASIF proximal femoral nail. *Arch Orthop Trauma Surg* 2004; 124: 31–7.

Ostrum R F, Marcantonio A, Marburger R. A critical analysis of the eccentric starting point for trochanteric intramedullary femoral nailing. *J Orthop Trauma* 2005; 19 (10): 681–6.