

after surgery. There were significantly more implant related complications in CHS than HA group (31.6% vs. 9.1% respectively, $P=0.009$). Rate of serious general complications did not differ between two groups (21.1% vs 36.4% respectively, $P=0.27$).

Conclusions

We believe that a hemiarthroplasty is appropriate for treatment of displaced intra-capsular femoral neck fracture in elderly. The CHS is associated with more implant related complications than HA in treatment of a displaced femoral neck fracture in elderly patients with ASA 3 or 4.

Keywords: Intra-capsular femoral fracture, elderly, mortality, cannulated hip screws, hemiarthroplasty

SURGICAL TREATMENT OF DISTAL TIBIA FRACTURES WITH INTRA-MEDULLARY NAIL



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Introduction.

Fractures of the distal tibia in the adult result from a combination of axial compression and rotational forces.

Surgical treatment of extra-articular fractures of distal tibia is a controversial topic throughout the entire literature. The recent development of more distal locking options with IM nails and anatomically-contoured angle-stable plates have improved our ability to stabilise these fractures.

Material and methods.

This study included 27 patients admitted and treated for distal extra-articular tibial fractures (AO 43 A1-3) between Jan 2012 and May 2015 in the IInd Clinic of Orthopaedics and Traumatology. Ten patients sustained open fractures (two type I GA, four type II GA and four type IIIA GA). Nine patients also had distal peroneal or peroneal malleolus associated fractures and 18 had associated supra-malleolar fractures of the peroneus.

IM nailing was the treatment choice for all cases (with reaming in 14 cases) and for the associated peroneal fractures ORIF with plates and screws was performed.

Results.

From a total of 27 cases, 4 (14,8%) cases healed with a varum >5o deformity, 3 (11,1%) cases developed pseudarthrosis that necessitated further surgical treatment (angular stable plates and bone graft), 1 (3,7%) case had intraarticular nail migration and infection, 19 (70,4%) cases had a favourable evolution with good outcome.

All fracture healing complications appeared within the cases treated without medullary canal reaming and without associated distal peroneal fractures.

Conclusions.

Cases treated with ORIF for distal peroneal fractures had better results than those treated by conservative means. IM nailing can be extremely important in open fractures where it can provide excellent fixation of the fracture fragments and allows, if necessary, extensive debridement and reconstructive treatment for soft tissues without direct implant exposure. It was also noted that reamed nailing was biomechanically superior in terms of stability to the unreamed nails.

OSTEOSYNTHESIS FAILURE AFTER THE PEDICLE SUBTRACTION OSTEOTOMY FOR THE CORRECTION OF SAGITTAL SPINE IMBALANCE



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Purpose

Pedicle subtraction osteotomy (PSO) in the lumbar spine is indicated in the treatment of large sagittal deformities of the lumbar spine. Substantial complications associated with PSO's include pseudarthrosis and mechanical failure. The purpose of the present study was to assess the complications of this procedure and the causes of mechanical complications.

Methods

Fifteen patients aged between 38 and 79 years (mean age 63.8+/-12.82) were operated between June 2011 and September 2014 for sagittal imbalance by means of one-level PSO.

Preoperative and postoperative value of radiological spino-pelvic sagittal parameters were measured. Clinical and radiological evaluations were conducted preoperatively and postoperatively at 6 months and 1 year. Clinical evaluation included intra-

and postoperative complications.

Results

Mean pelvic incidence was $54.86 \pm 11.82^\circ$. Lumbar lordosis (LL) was measured to $12.26 \pm 18.48^\circ$ preoperatively and increased to $42.73 \pm 14.05^\circ$ postoperatively ($p < 0.05$).

Mean gain of lordosis after PSO at index level (fig. 2), was calculated to $28 \pm 11^\circ$ [$14-41^\circ$]. SVA decreased postoperatively from 93.46 ± 36.69 mm to 61.73 ± 38.68 mm ($p < 0.05$).

Several complications ($n = 8$), including 2 minor (one dural tear with no clinical consequences and one transient radicular deficit) and 6 major with reintervention were observed in our series.

Conclusions

The main cause of mechanical complications was insufficient sagittal correction. To limit the risk of mechanical complications and to achieve a good sagittal balance, PSO must be associated with additional SPO's or a second corrective surgery to obtain a solid anterior fusion.

DIFFICULTIES IN CLASSIFICATION OF MALLEOLAR FRACTURES



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Objective

Classification of malleolar fractures are a matter of debate. The Lauge Hansen and the AO-classification are defined as complicated, where the Weber-classification is too simplistic. In trimalleolar fracture is the role and the size of the posterior fragment an additional complicating factor.

Material. Methods.

Interobserver study: four observers (2 traumasurgeons, 2 radiologists) classified 100 X-rays to the AO-, the Lauge-Hansen- and the Danis-Weber classification. In case of a trimalleolar fracture they were asked to measure the size of the posterior fragment.

Results

Within the Weber classification, there is a lot of discussion whether the fracture is a proximal "Weber B" or a distal "Weber C". This problem also exists in the AO-classification. In addition, it is not possible to classify the isolated medial malleolus fracture. The biggest problem of the Lauge-Hansen classification is that anamnestic (and in particular radiological) the trauma-mechanism remains unclear. As a result, it is possible to classify identically fractures in different groups. Small posterior avulsion fragments prove difficult to determine on the initial X-ray. Overshadowing of the fibula is the avulsion of a very small fragment shows to be limiting factor. Fixation if posterior fragments is, in most literature, dependent on the size if the posterior fragments. Some authors advocate that not only size but most important, the congruency of tibiotalar articular surface should be leading in choice of treatment for anatomic restoration. In that case, assessment of size if the posterior fragment is less important where the detection of smaller dislocated posterior fragment is of much more value.

Conclusions

The ankle X-ray is in most cases a useful tool in detecting clinical relevant fractures of the posterior malleolus however preoperative CT evaluation might be a very useful addition both in pre-operative planning and detection from smaller dislocated posterior fragments.

Keywords: malleolar fracture, classification, ankle

GAMMA-NAIL NAIL BREAKAGE IN THE OSTEOSYNTHESIS OF TROCHANTERIC FEMORAL FRACTURES



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Objective

Mechanical breakage of the implant is a rare complication attributed to delayed fracture union or nonunion. This study presents a series of cases of breakage and secondary lag screw dislocation after cephalomedullary nailing.

Material. Methods.

In a retrospective study between 02/2005 and 12/2013 we analyzed all patients with trochanteric and subtrochanteric fracture who had been treated by cephalomedullary nailing. Fractures were classified according to AO/OTA classification. 13 patients with third generation Gamma nail failure were included. 7 patients were women, and 6 men with a mean age of