

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 of posterior fragments is, in most literature, dependent on the size of 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 of 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

72 years (range 35-94).

Results

Important breakage occurred 6 month postoperatively (range 1-19 month). In 10 cases breakage was secondary to delayed or nonunion, which was thought to be mainly due to insufficient reduction of the fracture, wrong handling, incorrect drilling in the critical "red zone" (weak point of the nail around the insertion hole for the lag screw due to forces more than 1800 Newton), and in two cases due to loss of the lag screw because of missing set screw. In 1 case, breakage was apparent during elective metal removal following complete fracture healing. Short-term outcome was evaluated six months after operative revision using Harris Hip Score in 11 out of 13 patients showing a mean score of 84%. Complete radiological fracture healing has been found in 11 patients available for follow-up within 6 month after revision surgery.

Conclusions

Even though breakage of cephalomedullary nail osteosynthesis of trochanteric and sub trochanteric fracture is a severe complication, the result of our study demonstrate that revision surgery is warranted and provides good clinical and radiological short-term results.

Keywords: trochanteric fractures, gamma nail, breakage, complication

CLOSED K-WIRE METHOD OF PROXIMAL HUMERUS FRACTURES OSTEOSYNTHESIS



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Aim of the study: evaluation of the results of the surgical treatment by closed reduction, fixation with K-wires of fractures of proximal humerus in patients treated in IEM from Chisinau.

Material and methods: during the period 2015-2016, 183 patients were examined and treated for fractures of the proximal humerus of different complexity levels. Out of the total number of patients, 50 (27,3%) patients underwent surgical treatment. Out of the total number of patients treated surgically, 13 patients were operated through the minimally invasive method with indirect reduction of the fracture and osteosynthesis with K-wires in closed fracture focus. The rest of the patients treated surgically 37 (20,2%) patients, underwent the open reduction, internal fixation through other methods described in specialty literature (ORIF).

Results: the study group consisted of 13 (7,1%) patients. The average age was 59,53 years. Patients treated using minimally invasive method, the sex ratio being: women – 8 (61,5%) and men – 5 (38,5%) persons. Immediate results were appreciated according to postoperative radiological appearance, in 100% cases all the fractures united in axial alignment, it was appreciated as positive results. Follow-up results valued according to radiological appearance, full range motion of the traumatized shoulder joint in comparison with the contralateral (healthy) arm, and the quality of life: excellent and good in 10 (76,9%) cases, satisfactory – 2 (15,4%) cases and unsatisfactory – 1 (7,7%) case. It was determined the following complication – the inflammation around the K-wires in 3 cases.

Conclusions: Osteosynthesis with K-wires in closed outbreak constitutes a favorable method for the surgical treatment of proximal humeral fractures. This method is characterized by reduced traumatologic trauma, minimal hemorrhage and minor risk of perioperative complications.

Keywords: proximal humerus, K-wire osteosynthesis, minimally invasive.

FEMORAL ASEPTIC PSEUDARTHROSIS WITH IMPLANT FAILURE – CASES PRESENTATION



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Objective

Management of the femoral implant failure is one the hardest situation faced in traumatology. Our study try to understand the causes which lead to pseudarthrosis after primary osteosynthesis of femoral fracture with breakage of the implant and to establish a therapeutical protocol which can be applied to these cases.

Material. Methods.

We performed a retrospective study between 2011 and 2014, analyzing all patients with femur fractures treated in our hospital or in other hospitals but which came in our Clinic with pseudarthrosis and implant failure or breakage.