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.

Results
A total of cases were introduced in our study: 2 trochanteric fractures, 3 trochantero-diaphiseal fractures, 2 diaphiseal fractures, 1 distal periprothetic fracture, 1 supracondylar fracture. Every case had own particularities and the therapeutical stages were: choice of surgical approach, method of implant ablation with minimal bone loss, more stable osteosinthesis, bone graft. The time of the operation should be as short as possible to minimize infection risk.
Conclusions
Pseudarthrosis of the femoral fracture with breakage of the implant is a tough situation for any surgeon. Understanding the causes which produced the implant failure and establishing a therapeutical strategy to correct them are the goal of the treatment.
Keywords: femoral fracture, implant failure, breakage, pseudarthrosis

OSTEOSYNTHESIS METHODS IN POLYTRAUMA WITH MUSCULOSKELETAL SYSTEM INJURIES

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Purpose: to analyze osteosynthesis methods in polytrauma and their performing time.
Material and methods: were analyzed methods and early results of surgical treatment in polytrauma patients treated in IEM, in period 2011-2015.Polytrauma were classified according to 4 regions in: cvadriregional – 2(2,6%), triregional – 19(24,7%), biregional – 56(72,7%). The study group was – 77 patients surgically treated, including 29(37,7%) women and 48(62,7%) men. Average age was 37.5 years, predominantly affecting working-age population (21-60 years) - 68 (88.3%), with highest incidence in group 18-30 years - 31(40.2%). Musculoskeletal lesions were: 140 fractures, multiple - 53(68.8%) and single - 24(31.2%); open fractures-13(9.3%) cases. Fractures in upper limb and scapular-humeral belt were 56(40%), pelvis-21(15%), lower limb - 57(40.7%) and spine - 6(4.3%) cases.
Results: immediate surgery - 13(16,9%) cases of open fractures, chosen osteosynthesis material being external fixator. Delayed surgical treatment - 64(83,1%) cases, performed at 1-19 days after trauma, with an average of 6.5 days. Osteosynthesis methods consisted of: intramedullary nail – 29(37,6%), DCS – 2(2,6%), plate and screws – 26(33,7%), modular plate – 7(9,1%), angular stable plate – 1(1,3%), transkeletal traction – 5(6,5%), PFN – 2(2,6%), supporting plate – 4(5,2%), K-wire – 13(16,8%), screws – 4(5,2%). The immediate results were appreciated by X-ray aspect, being satisfactory in all cases.
Conclusions: Surgical treatment of MS injuries is divided into serial operations, respecting the order of priority of injuries depending on their vital risk (Damage Control Orthopaedics) and simultaneous surgeries performed along with deshock supported therapy (Early Total Care), which tend to settle early and definitively maximum of lesions in polytrauma. Duration and volume of surgical interventions for skeletal injuries in polytrauma should be chosen with consideration of injuries severity, patient's state and traumatic disease period.
Keywords: osteosynthesis, polytrauma, DCO, ETC.

TREATMENT OF DIAPHYSEAL FRACTURES OF THE HUMERUS

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Introduction: Humeral shaft fractures represent approximately 3% of all fractures and 20% of the humeral fractures. Treatment modalities have evolved greatly, however, fundamental management principles have remained the same over time. Currently the surgical techniques and treatment outcomes improved a lot. Despite numerous treatment techniques, plate osteosynthesis remains the gold standard for fixation of diaphyseal fractures of the humerus. Locked intramedullary rods have become very popular in recent decades due to the minimally invasive treatment trends. Thus today there are still controversies in the treatment tactics of diaphyseal fractures of the humerus.
Objectives: Evaluation of treatment of patients with diaphyseal fractures of the humerus.
Materials and methods: The study was conducted on a sample of 225 patients, between 01.01.2013-31.12.2015 in the Orthopaedics and Traumatology Clinic of IMSP IMU.
Results: Of the 225 patients, surgery was performed on 68.4% of cases and 31.5% - conservative treatment. The surgical treatment used the following methods of osteosynthesis: ORIF the anterior-lateral approach -39.61%; ORIF through posterior approach -35.06%; Closed intramedullary nailing - 22.72%; Extrafocal osteosynthesis with rod type apparatus - 2.59%.