

ap to 79 years. Elapsed time from the primary arthroplasty up to the revision of the periprosthetic fractures varied from 2 months up to the 13 years. Cases were staggered according to Vancouver classification. We have encountered fractures of type AG in 4 cases, type AL - 3 cases, type B1 - 12 cases, type B2 - 14 cases, type B3 - 7 cases, type C - 27 cases. Fractures of the type A have been treated with simple wire fixation (4 cases) tension band wiring (3 cases). Fractures of the type B1 were treated by the plate osteosynthesis; type B2 and B3 - by revision arthroplasty. In fractures type C we performed the osteosynthesis by the plates with angular stability in 15 cases or regular plates with association of the bone grafts in 12 cases.

**Results:** In fractures of the type A we found one case of osteosynthesis instability, which was well tolerated by the patient. Fractures of the type B represent one of the biggest problems. Especially type B1 and B2, when was difficult to differentiate if the stem was stable or not. In 3 cases we did mistakes in appreciation of the type B1 and performed the osteosynthesis. In all these cases occurred the instability of the stem, that led to the revision arthroplasty procedure. In cases of the fractures type C we met the problem of the associated osteoporosis. This led to technical difficulties in achieving stable osteosynthesis by regular plates.

**Conclusions:** The results confirm that correct classification, compliance with treatment protocols of the hip periprosthetic fractures and strict differenciation between different types of the fractures can lead to good functional result.

**Keywords:** periprosthetic fractures, Vancouver classification, revision hip arthroplasty

## RESULTS OF SURGICAL TREATMENT OF NEER 4-PART FRACTURE-DISLOCATIONS OF PROXIMAL HUMERUS



**Alexandr Ghergheliju, Alexandru Bețisor, Cristian Uncuța, Iurie Codreanu**

*Institute of Emergency Medicine, Chișinău, Republic of Moldova*

**Purpose:** to analyze results of ORIF surgical treatment of Neer 4-part fracture-dislocation of proximal humerus (FDPH).

**Material and methods:** in period 2013-2015, in IEM's Orthopedics Department were treated 11 patients with Neer 4-part FDPH, injury's nature being specified by Rx and CT-scan. All patients underwent ORIF, in 6 cases with T-plate and 5 cases-Philos plate, at 9-40 hours after trauma. Gender distribution: 6 women and 5 men, with age limits: 28 and 67 years. Right thoracic limb was fractured in 7 cases, left - 4 cases. All dislocations were anterior. Patients were monitored 6-18 months. Deltoido-pectoral approach was performed in 8 cases and transcoracoid - 3 cases, being used in marked displacement of humeral head to prevent neuro-vascular complications. Long bicipital tendon was used as anatomical landmark between greater and lesser tubercle, which were fixed to plate with non-absorbable threads. Diaphysis was impacted in order to obtain primary stability. Functional outcomes were assessed using Constant score and analog pain scale.

**Results:** at 6-8 months was determined 120° flexion angle (in 90-135° diapason), average abduction angle - 100° (in 70-140° diapason). Average Constant score was 72 points (in 60-85 diapason). Mild pain was determined in 7 cases, moderate - 4 cases. In 8 cases fracture was at surgical neck's level, in 3 cases - anatomical neck's level. In 1 case was detected transient axillary nerve injury, screw's migration from humeral head - 1 case, humeral head's AN - 5 cases and vicious consolidation - 3 cases.

**Conclusions:**

1. Successful treatment of given injury is provided by anatomic reduction and stable fixation, with maximum maintaining of fragments blood supply.
2. Humeral head's AN doesn't exclude good functional outcome, unlike fragments vicious consolidation.
3. Transcoracoid approach allows avoiding of severe neuro-vascular complications, ensures convenient fragments reposition and fixation.

**Keywords:** fracture-dislocation, proximal humerus.

## PARTICULARITIES OF POSTTRAUMATIC RETROPERITONEAL HEMORRHAGE IN PELVIC FRACTURES



**Gheorghe Ghidirim \*, Vladimir Kusturov \*\*, Irina Paladii \*, Anna Kusturova \*\*,**

*\*State University of Medicine and Pharmacy "Nicolae Testemițanu", Republic of Moldova*

*\*\*Institute of Emergency Medicine, Chișinău, Republic of Moldova*

**Aim:** To study the particularities of posttraumatic retroperitoneal hemorrhage in pelvic fractures.

**Material and methods:** We present the analysis of patients with pelvic fractures and retroperitoneal hemorrhages (n=201). The average age of patients was 38,26±15,03 years. Clinical examination (n=152) and forensic-medical examination (n=49) was carried out for evaluation of the volume and source of retroperitoneal hemorrhages. Patients with stable hemodynamic

were examined by the standard scheme: pelvic X-rays, USG, CT. Pelvic injuries were divided according to M.Tile classification, retroperitoneal hemorrhage – according to zonal Sheldon classification.

**Results:** Localization and volume of the pelvic retroperitoneal hematoma was determined by the source of bleeding, spreading according to pelvic ring instability, severity of internal organs injuries and pelvic vessels lesions. Pelvic fractures: type A - 75(37,31%), B - 55(27,36%), C - 71(35,32%). It was established that pelvic retroperitoneal hemorrhages were the most common and numerous – in 130 (64,67%) patients. The main sources of pelvic retroperitoneal hemorrhages were pelvic fractures with venous plexus lesions (type B, C, n=126) and urinary bladder injury (n=35). We used conservative treatment in pelvic venous hemorrhages (147 from 152 patients) to stop pelvic bleeding: early pelvic stabilization, patient position without active motions, hemostatic drugs. If conservative treatment was not effective in arterial bleeding (n=5), we used pelvic packing, vessel ligation, etc. Revision of pelvic bleeding was not performed. It was impossible to determine exactly the source of spreading (46,6%) retroperitoneal hemorrhage even by forensic-medical examination. Pelvic stabilization by device for external fixation performed at admission allowed to prevent massive intrapelvic hematomas and complications in patients with pelvic fractures (type B, C).

**Conclusions:** the particularities of posttraumatic retroperitoneal hemorrhage in pelvic fractures are their massive volume, spreading, predomination of venous bleeding (88%). Conservative treatment was effective in 96,7% of venous pelvic bleeding. Early pelvic stabilization prevents massive retroperitoneal hemorrhages and posttraumatic complications.

**Keywords:** retroperitoneal hemorrhage, pelvic fractures, early stabilization

## TREATMENT OF THE DISTAL FEMUR OPEN FRACTURES



**Dumitru Hîncota, Vadim Madan, Gheorghe Croitor**

*Orthopedics and Traumatology Clinic "Vitalie Bețșor", State University of Medicine and Pharmacy "Nicolae Testemițanu", Republic of Moldova*

**The aim:** Presenting the surgical treatment results in 10 patients with distal femur open fractures with analysis of management a case of septic complication.

**Materials and methods:** The analyze of surgical treatment results in 10 patients was performed. Gustillo-Andersen classification was used: type I – 1 case, type II – 4 cases, type IIIA – 5 cases, type IIIB – 2 cases (2 patients with bilateral fractures). In all patients the first stage consisted of: primar surgical debridment with applying skeletal traction through the tibial tuberosity with leg "in empty" - 6 cases; stabilization with external fixators- 4 cases; "limited" fixation of joint surface with screws and stabilization with external fixators- 2 cases. The final fixation was used after an adequate soft tissue condition was obtained, in a period of 8 to 25 days with an average of 14,3 days.

**Results:** In 9 of 10 patients after surgical debridement was primar wound healing .

In 1 patient with type IIIA fracture, which was not performed primar external fixation after final fixation complicated by osteitis of the femur.

After 2 debridements formed a fistula, which was eradicated at 4 months, with internal metal fixator removal and bone defect plasty with composite based on collagen and antibiotic when the fracture was in the stage of consolidation. The functional score (Neer) in medium at all group of patients is 74 points.

**Conclusions:** The surgical treatment of severe open fractures in 2 stages, with primar surgical debridement with stabilization by external fixators at first and functional stable internal fixation at second is a tactics to obtain optimal functional results and avoid complications.

**Keywords:** distal femur, open fracture, surgical debridement, osteosynthesis.

## CURRENT CONCEPTS IN DISTAL FEMUR FRACTURES TREATMENT



**Dumitru Hîncota, Vadim Madan, Gheorghe Croitor**

*Orthopedics and Traumatology Clinic "Vitalie Bețșor", State University of Medicine and Pharmacy "Nicolae Testemițanu", Republic of Moldova*

**The aim:** Presenting the methods of evaluation and surgical treatment of patients with distal femur fractures treated in Orthopedics and Traumatology Clinic "V. Bețșor" during 2010-2015 years.

**Materials and methods:** There were analyzed 120 clinical cases with 123 distal femur fractures (3 patients were with bilateral fractures); men - 58 (48.3%) and women - 62 (51.7%) aged between 17 and 90 years, (mean age 53,4 years). Trauma circumstances: traffic accident - 40 cases, habitual trauma - 71, precipitation – 7, industrial – 1, by firearm - 1. Fractures were classified as AO: type A1 – 13 cases, type A2 – 29 cases, type A3 – 39 cases, type B1 – 2 cases, type B2 – 1 case, type C1 – 7 cases, type C2 – 27 cases and type C3 – 5 cases. The definitive osteosynthesis was performed at the period of 0-52 days with