

**Aim of study:** to analyse the result of the surgical treatment of tibial pilon fractures.

**Materials and methods:** We analyze the results of the surgical treatment of 51 tibial pilon fractures treated in the last four years, according on the severity of bone fracture and soft tissue lesions. We performed fixation in each case in one (35 patients) or two stages (16 patients), using the classifications Ruedi-Allgower and Tscherné. At the first stage we manage with the use of external fixation following the AO-ASIF principles: ligamentotaxis in the Ilizarov external fixation or Delta-framed external fixator across the ankle joint. At second stage was performed reduction and reconstruction of the articular surface with medial stabilization with a MIPO using a technique requiring only limited skin incisions (a reduced invasive technique).

**Results:** Twenty-three fractures type Ruedi-Allgower I-II healed within an average of four months. 38 patients has developed posttraumatic arthrosis, 21 articular stiffness, 4 superficial skin necrosis, 3 osteomyelitis, 7 mechanical complication.

**Conclusions:** On the basis of our results, we now prefer a two-step procedure for the treatment of tibial pilon fractures. In the first stage, primary reduction and external fixation applied across the ankle joint. After recovery of the soft tissues, the second stage entails internal fixation with a medial plate using a reduced invasive technique.

**Keywords:** tibial pilon fracture, MIPO, postoperative complications.

## SURGICAL TREATMENT OF THE DISLOCATIONS AND FRACTURE DISLOCATIONS OF CARPAL BONES



**Dumitru Buzu, Ion Vacarciuc, Sergiu Ursu, Dumitru Maftai, Ștefan Cojocari**

*Clinical Hospital of Traumatology and Orthopedics, Chișinău, Republic of Moldova*

**The aim:** Dislocations and fractures - dislocations of the carpal bones of the wrist are serious injuries. The problems of diagnosis and treatment of the these lesions are discussed extensively in specialty literature, but the diagnostic mistakes committed during the acute dislocation and fracture-dislocations of the carpal bones reaches 60%, a fact which shows the increasing number of outdated injuries difficulties in treatment and unfavorable functional outcomes.

**Materials and methods:** In department of the Hand surgery CHTO for 2006-2015 were found on stationary treatment 89 patients with dislocations and fracture-dislocations of the carpal bones. The most frequent were traumatized in the period of working age - to 40 years - 70 (79%) patients.

The analysis of clinical cases demonstrated that causes of the outdated injuries were diagnostic errors to 43 (50%) patients, treatment errors in 18 (20%) patients and the associated concomitant injuries 22 (25%).

As the surgical treatment, indications were failures orthopedic reduction of the dislocation and fracture - dislocations of the carpal bones, fragments displacements scaphoid bone and outdated perilunate injuries.

**Results:** Open reduction of dislocation and fracture-dislocations of the carpal bones was performed in 78 (87.6%) patients, of whom 36 (40.4%) open reduction was performed in one-step, but in others 42 (47, 2%) patients open reduction was performed in two stages with the use of preventive external fixator for ligamento-capsulo-taxis of the wrist.

On 8 (9%) patients with outdated perilunate fracture-dislocations have been performed selective arthrodesis by 4 carpal bones with excision the fragments scaphoid bone.

In a patient with degree V of perilunate dislocation - with enucleation lunate bone in the forearm was performed replanting of lunate bone, and in another patient was performed excision lunate bone.

**Conclusions:** The procedures of the surgical treatment of dislocation and fractures-luxations of the carpal bones have facilitated the obtaining of positive results in 81 (91%) patients.

**Keywords:** Carpal bones, fracture dislocations.

## TREATMENT OF DISPLACED FEMORAL NECK FRACTURES IN ADULT AND ELDERLY PATIENTS



**Vitalie Cobzac, Viorel Nacu, Mariana Jian, Vadim Madan, Gheorghe Croitor**

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

**The aim** of this study is to analyze the incidence, comorbidities, treatment results and mortality in patients with displaced femoral neck fractures hospitalized during 01.01.2012 -31.12.2012 in Orthopedy and Traumatology clinic „Vitalie Bețșor”.

**Materials and methods**

Study includes 211 cases (136 women with average 73 years and 75 men with average 64 years) treated with displaced femoral neck fracture, that were examined clinically and radiologically after 2 years of follow-up. The results was objectivized with Harris hip score evaluation and EQ-VAS life quality self-assessment. Fracture management was performed depending of

patient health state, hospital endowment at that moment and patient/relatives desire. Functional treatment was performed in 64 patients (average 75 years), osteosynthesis in 18 (average 48 years) and hip prosthesis in 129 (average 70.41 years).

### Results

In 2012, medical care received 283 patients (7.51%) with femoral neck fracture, of which displaced was 211 (74.35%), comorbidities was present in 97.15% of these patients. During hospitalization in functionally treated patients group were 3 deaths and those with hip prosthesis – 2. Overall mortality at 2 years was 28.9%. Harris hip score in patients treated functionally is 40.35 points, in those with osteosynthesis – 74.75 points and hip prosthesis – 81.28 points; respectively EQ-VAS is 21, 61.8 and 79.5. Radiological exam found in osteosynthesis group: pseudoarthrosis in 2 cases and avascular necrosis of femoral head – 3 cases; in hip prosthesis group: subsiding – 4 cases and periarticular ossification – 13 cases.

### Conclusions

Hip fractures in older people is a serious concern for society. In this study femoral neck fractures amounted 7.51% of all hospitalized patients in our clinic. Comorbidities were present at 97.15% of examined cases. Mortality at 2 years follow-up was 28.9%. The best results were found in hip prosthesis group.

**Keywords:** femoral neck, fracture, prosthesis, osteosynthesis

## THE SURGICAL TREATMENT OF THE DISTAL METAPHYSIS RADIUS FRACTURES (DMFR)



**Ștefan Cojocari, Dumitru Buzu, Sergiu Ursu, Dumitru Maftei, Ion Vacarciuc**

*Clinical Hospital of Orthopedics and Traumatology, Chișinău, Republic of Moldova*

**The goal of our study** was retro and prospective analysis of the results of surgical treatment of DMFR

**Material and methods:** In Hand Surgery Department during the period of years 2011-2015 were diagnosed and treated surgically 546 patients with DMFR (male: female = 1.78: 1).

The average age of 59.3 years for men and women 60.2 years, mean age 58.5 years.

Predominantly rural population with a ratio of 1.5: 1.

Right hand is most often traumatized to the left hand and bilateral with a ratio of 7.75: 3.75: 1.

According to the classification Kapandji (K) and AO in our practice we have met the following cases: 18(3,30%) – K.I(AO:23-A2.2 - 11 ;23-A3 - 7 patients), 272(49,82%) cases– K.II(AO:23-C1.1), 51(9,34%) – K.III(AO:23-C1.3), 14(2,56%) – K.IV(AO:23-C1.2), 15(2,75%) – K.V(AO:23-B1.1 - 11 cases ;23-B1.2 - 4 cases), 7(1,28%) – K.VI(AO:23-B2.1 - 4 cases;23-B2.2 - 3; 23-B2.3 - 1 case), 8(1,47%) – K.VII(AO:23-B3.1 - 5 cases ;23-B3.2 - 1 case ;23-B3.3 - 2 cases), 8(1,47%) – K.VIII(AO:23-A2.3), 80(14,65%) – K.IX(AO:23-C3), 25(4,58%) – K.X(AO:23-C2.1 - 16 cases;23-C2.2 - 7 cases ;23-C2.3 - 2 cases).

According to the classification proposed by Максимов А. (2013), the viciously consolidated fracture of the radial distal metaphysis we have 48(8,79%) cases – K.11(type1 - 4 cases; type2 - 30 cases; type3 - 12 cases; type4 - 2 cases).

Depending on the type of fracture, the extent of stability and impaction, the type and the tilting angle of fragments, the surgical treatment was performed by the following methods: osteosynthesis with brooches - 149(27,38%); intrafocal osteosynthesis with brooches - method Kapandji – 269(49,24%) patients; plate osteosynthesis - 67(12,23%); ligamentocapsulotaxia in external fixation appliance - 13(2,36%); corrective osteotomy – k-wire osteosynthesis – 24(4,40%); corrective osteotomy - plate osteosynthesis – 16(2,93%); osteoclasia - plate osteosynthesis – 8(1,47%);

In 29(5,31%) cases was determined acute carpal tunnel syndrome, which has intervened by decompression of the median nerve. In 5(0,92%) cases K.XI (tip2,3,4) was determined carpal tunnel syndrome, the median nerve compression ultrasonography was determined in the carpal tunnel more than 18% versus proximal, was performed excision of the carpal ligament and median nerve neurolysis.

### Conclusion

- The problem of treatment DMFR far remains current, despite of the successes in the treatment of orthopedic and experience in the treatment FMDR

- In our study, most patients were treated by the method Kapandji - 269(49,24%), that ensuring a good bone junction, excluding secondary displacement.

- With a minimum operator volume, exclude the risk of complications and allows a more rapid rehabilitation hand.

## TREATMENT RESULTS OF OPEN FRACTURES OF TUBULAR BONES



**Stanislav Coșciug, Mihail Darciuc, Sergiu Șoric, Liviu Volentir, Sergiu Nițelea, Alexandr Ghergheliju, Vitalie Tocarciuc**

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