puncture of the pleural cavity and with systematic X-ray control. The main aim was to maintain permeability of respiratory ways – sanation of the tracheobronchial tree with curative bronchoscopy, use of mucolytic and broncholytic drugs, aerosol inhalations and magnetotherapy.

**Results** of early stabilization of rib cage by fixation of multiple rib fractures, fractures of the sternum, scapula, and clavicle proved its effectiveness; in complex with physiotherapy it significantly decreased the period of hospitalization. The mean duration of mechanical ventilation was reduced, complication rate decreased by 20,8%.

**Conclusions:** Thoracic injuries in multiple and associated trauma are severe lesions that need complex examination and urgent treatment to prevent pleural complications, to reduce the period of hospitalization and to improve long-term results. **Keywords:** thoracic injuries, multiple rib fractures, early stabilization, complex treatment

## **TIBIAL PLATEAU FRACTURES MANAGEMENT**



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**The aim:** Presenting the methods of evaluation and management of patients with tibial plateau fractures treated in Orthopedics and Traumatology Clinic "V. Bețișor" during 2014-2015 years.

**Materials and methods:** There were analyzed 110 clinical cases with tibial plateau fractures: men – 46(42%) and women – 64(58%), with mean age 52,4 years. Trauma circumstances: habitual trauma – 69 cases, traffic accident – 18, precipitation – 12, sport – 7, aggression – 4. Fractures were classified as Schatzker: type I – 14 cases, II – 28, III – 17, IV – 10, V – 28, VI – 13, including 107 close, 3 open (Gustillo-Andersen type I). All patients were examined by X-ray, 78 by CT. Management tactics applied: 68 patients- surgical treatment, 42 cases – orthopaedic. Surgical treatment consisted of close reduction – 8 cases (6 - percutaneus canulated screws, 2- Ilizarov apparatus), open reduction – 60 cases: 49- plate (15 with submeniscal approach), 11- 2 plates. It was performed autoostheoplaty in 12 cases (3-type II, 4-III, 2-V, 3-VI).

**Results:** Until the present 50% of patients were examined clinicaly, radiologicaly and evaluated according to Lysholm Knee Scoring Scale to a term of 3,6,12,24 months. Bone consolidation was achieved in a period of between 10 to 20 weeks. To 8 patients during the postoperative period appeared complications, which were depending on the complexity of fractures and accuracy of surgical treatment. Remote results were depending on the stability of osteosynthesis, precocity, rightness of functional reeducation and patient compliance.

**Conclusions:** Individual approach of tibial plateau fractures management, the right choice of implants and minimally invasive surgical techniques is an optimal tactics to obtain favorable functional results and avoid possible complications. **Keywords:** tibial plateau, fracture, management

# TREATMENT OPTIONS FOR DISPLACED FEMORAL NECK FRACTURES IN ELDERLY PATIENTS

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#### Objective

There are few studies known about the influence of different surgical procedures in patient mortality and postoperative outcome in these kinds of patients. In this study we compare the outcome of cannulated hip screws (CHS) with hemiarthroplasty (HA) for management of intra-capsular femoral neck fractures in elderly with severe systemic conditions. **Material. Methods.** 

We conducted a retrospective cohort study of all patients admitted to our trauma center with a femoral neck fracture between January 2009 and June 2011. Inclusion criteria are: 70 years or older, ASA 3 or higher, a displaced femoral neck fracture and treatment with either three cannulated hip screws or a cemented hemiprosthesis. The primary outcomes was mortality during follow up. Secondary outcomes were post-operative complications, re-operations rate and length of hospital stay. We tracked this using the Romanian personal registration system.

#### Results

Between the first of January 2010 and December 2012, underwent 326 patients a surgical procedure for an intra-capsular femoral neck fracture: 173 underwent hemiarthroplasty (HA), 11 underwent total hip replacement (THR), 96 underwent closed reduction and internal fixation with Canulated Hip Screws (CHS) and 46 underwent closed reduction and internal fixation with Dynamic Hip Screw (DHS), 74 patients met our inclusion criteria. The medical records retrieved 34-64 months

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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 different between two groups (21.1% vs 36.4% respectively, P=0.27). **Conclusions** 

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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, hemiartroplasty

# 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>50 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 that 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 substraction 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-