The / International Medical Congress for Students and Toding Doctors

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**Introduction.** Dupuytren's disease (M 72.0) is a fibroproliferative disorder, a disease of the conjuctive system of unknown etiology, which often leads to shortening and thickening of the palmar and digital fascia, to a permanent and irreversible flexion of the fingers. Dupuytren's contracture mainly affects the ring finger and pinky, and occurs most often in older men of Northern European descent.

**Aim of the study.** The retrospective and prospective analysis of the surgical treatment results of MD through various surgical methods.

Materials and methods. During 2013-2017, in department of Hand Surgery with the application of microsurgical techniques in Clinical Hospital of Traumatology and Orthopedics, at 426 patients (361 (84.7%) men and 65 (15.2%) women) Dupuytren's disease was diagnosed and treated with different surgical techniques. The mean age for men was 57.3 years and for women 59.6 years, mean age for both - 58.5 years. Urban patients - 156 (36.7%), rural - 270 (63.3%). The number of patients that had their right hand operated was 246 (57.7%) and the left hand -180 (42.3%). The most commonly affected finger was finger IV – 129 patients (51.19%); finger V - 92 patients (36.51%); III - 22 (8.73%); I - 8 (3.17%); II - 1 (0.4%). III degree of Dupuytren disease was found in 343 (81%) patients, II degree at 60 (14%) and IV degree in 23 (5.4%) patients. In most cases (289 patients) selective excision of palmar aponeurosis with Z-plasty was performed; in 37 cases percutaneous needle aponeurotomy (PNA) was performed; in 13 patients - the open palm technique (from Mc Cash 1964); in 12 patients - cross finger skin flap; in 3 cases - radial forearm flap and in 2 cases – the amputation of pinky finger

Results. In order to evaluate the patient's condition and the function of the pre- and postoperative upper limb the DASH subjective inquiry "Disability of the Arm, Shoulder and Hand Outcome Measure" was used.

Conclusions. Regardless of the successes in the treatment of orthopedic diseases and experience in the treatment of the serious forms of Dupuytren diseas, the issue of the treatment of these patients remains current. Surgical treatment can correct contractions, but the issue of recurrences and enlargements of the disease remains unresolved.

**Key words:** Dupuytren's contracture, Dupuytren's diseas, Dupuytren's diathesis

## 184. THE VASCULARIZED ALLOTRANSPLANT- SUCCESSFUL ALTERNATIVE FOR MASSIVE BONE DEFECTS

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**Introduction.** The massive bone defects after trauma, in congenital anomaly, tumors, infections or nonunions is a real dilemma for reconstructive surgery of the locomotor system. Contemporary methods that are usually used for reconstruction of the bone structure are: bone transplant, cryopreserved allografts, autograft or prosthesis, having high levels of morbidity and complication rates. Their common features are bad blood circulation and unviability, resulting in mechanical instability and poor bone consolidation (periprosthetic fractures, stress fractures, pseudoarthrosis, sepsis).

**Aim of the study.** To determine what are the different methods used in reconstruction of massive bone defects.

**Materials and methods.** Scientific papers and research results regarding bone defects reconstruction methods were reviewed.

Review. A vascularized bone graft, reclosed microsurgicaly in the circuit, has a good potential for regeneration, plasticity, and a post-graft mechanical stiffness. The vascular bone autograft, with all biological and mechanical characteristics is considered the "gold standard" in the treatment of small bone defects. However, it becomes insufficient in size, shape and cellular repair capacities in the case of massive bone defects due to the increased circulatory needs of the injured segment. Maintaining the osteoplastic properties of the vascularized autograft and combining them with the orthotopic characteristics of an allogene bone or bone segment would be a successful alternative for the reconstructive surgery of the locomotor. The dilemma imposed by vascularized composite allotransplantation (VCA), is immunosuppression (IS) and immunomodulation for life, which is not justified in case of vital organs (heart, liver, kidneys) transplants, because of adverse effects risk (systemic complications, sepsis, neoplasms). Without an IS, the immune cascade will cause vascular endothelial cell lysis, compromise microcirculation with necrosis of the graft. The last studies, describe the surgical neoangiogenesis typical of the host in VCA with a short-term IS - 14 days, as an effective one, with results that allow consolidation and mechanical stability. Studies are performed preclinically on rats, rabbits and pigs. Other studies present decelularization methods of the vassel while preserving vascular stiffness.

**Conclusions.** A perfect alternative in treatment of the massive bone defects is using a vascular allograft, without associated immunosuppression.

Key words: massive bone defects, reconstruction, allograft

## 185. INDICATIONS FOR USING PROPER TYPE OF PROSTHESIS IN ELDERLY PATIENTS WITH FEMORAL NECK FRACTURES

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**Introduction.** Femoral neck fractures in the elderly are frequent due to the increase in life expectancy. These injuries represent a great health care problem and have a significant impact on health insurance costs. Hip replacement for this kind of fractures is a common and safe procedure, which will allow to mobilize patients shortly after surgery. Types of endoprosthesis used in elderly include unipolar, bipolar hemiarthroplasty, or total hip arthroplasty. Over ¾ of cases occur after the age of 60, with the main predisposing factor being osteoporosis, so a minor trauma involving an accidental fall is sufficient to produce a fracture. In young people, to produce such a fracture, a much stronger impact is required.

**Aim of the study.** Summarizing of indications and contraindication of using a certain type of prosthesis for the treatment of the femoral neck fractures in elderly patients.

**Materials and methods.** For the study were used the materials collected in the 2nd Department of the PMSI Clinical Hospital for Orthopedics and Traumatology during the 2012-2017 period, that included data of 464 elderly patients with femoral neck fracture. The main focus was: the Garden classification of the fracture, age of the patient, their general condition, osteoporosis and osteoarthritis degrees.

**Results.** In 2nd department were hospitalized patients with Garden III and IV type of the femoral neck fracture. Unipolar prosthesis was used in 171 cases (36.9%), only in patients over 80 years; bipolar hemiarthroplasty in 192 cases (41.5%), age variation was of 60 - 80 years; also a total hip arthroplasty was selected for 101 (21.6%) patients with advanced degrees of osteoarthritis. In our