

COMPARATIVE CHARACTERISTICS OF METHODS OF TREATMENT OF DISTAL HUMERUS METAEPHYSIS FRACTURES

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Authors analyzed the results of operative and conservative treatment 194 patients aged 19-89 years (mean age $50,2 \pm 1,3$ years) with the distal humerus metaepiphysis fractures. Male was – 75 (38,7%), female – 119 (61,3%). According to AO/ASIF classification the fracture was type A – 15 (7,7%); type B – 40 (20,7%); type C – 139 (71,6%). According to method of treatment all patients was divided on 2 groups (1 – operative and 2 - conservative treatment) and each group on 2 subgroups (basic and control). The 1 group (operative treatment) was 140 (72,2%) patients, 99 (70,7%) – basic subgroup and 41 (29,3%) control. The 2 group (conservative treatment) was 54 (27,8%) patients, 29 (53,7%) – basic subgroup and 25 (46,3%) control. The basic methods of treatment in 1 group was: osteosynthesis by pins in 10 (7,1%) patients, external fixation device - 10 (7,1%), osteosynthesis by screw - 17 (12,2%), combine osteosynthesis - 49 (35,0%) and osteosynthesis by plates - 54 (38,6%). The methods of treatment in 2 group was: cast immobilization in 43 (79,6%) patients and skeletal traction - 11 (20,4%).

In the conditions of experiment the explored features of the tensely-deformed state of distal of humerus bone, and it is set that at the hand load 50,0 N, the value of tension in the area of bone structures makes 1,3 kN, that is 26 times more load. Also fixing by pins-screws, plates and combined constructions creates effort for fixing of fragments of fractures from 18,7 to 95,2 kPa, and when fixing by G. A. Ilizarov external device appear from 2,3 to 114,0 kPa, that can result in displacement.

Method of combined osteosynthesis for the distal humerus metaepiphysis fractures is offered. Indications to the methods of treatment depending on the type of fracture are defined and dependence of development of complications of treatment on duration of elbow joint immobilization is proved. Periods and approaches of restoration treatment are developed, dependence of results of restoration treatment on the type of fractures and method of treatment is set.

The average follow-up was $39,0 \pm 0,8$ month (from 7 month to 6 years) after trauma. Average score according to the Mayo clinic scale was $81,7 \pm 1,2$ points (from 45 to 100). Analyzing the results of treatment 194 patients with the distal humerus metaepiphysis fractures showed that application of the differentiated approaches of treatment positive results are got for 91,4% of patients, in comparison with 71,2% of control subgroup ($p < 0,001$).