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OF THE EFFICIENCY OF THE USE OF RECONSTRUCTIVE PLATES AND SCREWS IN SHELTERED FRACTURE OF THE DISTAL END OF THE HUMERUS

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Abstract:
The article presents surgical methods for the treatment of patients with comminuted fractures of the distal end of the humerus in 79 patients. The patients were divided into three groups depending on the method of surgical treatment. The results of treatment of surgical methods of all three groups were studied and conclusions were drawn. The proposed method of the authors proved the effectiveness of the treatment of fractures of the humerus.

Keywords: Bones, plates, humerus, treatment, injury, treatment.

INTRODUCTION. Intra-articular fractures of the distal end of the humerus - a severe injury to the elbow joint. Fractures of the distal end of the humerus occur in 0.5-2% of patients with fractures of the bones of the musculoskeletal system. According to various authors, injuries to the distal end of the humerus account for 7.8-24% of all fractures of the upper limb. In recent decades, there has been an increase in injuries in general and in particular, this localization. Since these fractures often occur in elderly and old patients, and the proportion of this population in the population is increasing, the number of patients with this pathology is also decreasing. At the same time, the results of treatment of these patients are adversely affected by systemic osteoporosis and hypotrophy of muscle tissue. The results of conservative treatment of such fractures often give unsatisfactory results.

The treatment of intra-articular fragmental fractures of the distal end of the humerus always remains a problem, since, after the treatment of such complex fractures, it leads to frequent complications: flexion-extension contractures, nonunion of bone fragments, and even in rare cases leads to ankylosis. The number of complications is still high and reaches 20-30%. To prevent such terrible complications, it was necessary to create ways to solve this problem.

Intra-articular comminuted fracture of the distal end of the humerus remains a problem for traumatologists. With a comminuted intra-articular fracture of the distal end of the humerus, most cases fail to close reduction or insufficient external fixation makes conservative treatment difficult. Because of what we resort to surgical treatment..

PURPOSE OF THE WORK: To study the results of treatment for a comminuted fracture of the distal end of the humerus using reconstructive plates with screws.

LITERATURE REVIEW. Intra-articular fractures of the distal end of the humerus - a severe injury to the elbow joint. Fractures of the distal end of the humerus occur in 0.5-2% of patients with fractures of the bones of the musculoskeletal system. According to various authors, injuries of the distal end of the humerus account for 7.8-24% of all fractures of the upper limb [2,4].

In recent decades, there has been an increase in injuries in general and in particular, this localization. Since these fractures often occur in elderly and old patients, and the proportion of this population in the population is increasing, the number of patients with this pathology is also decreasing. At the same time, the results of treatment of these patients are adversely affected by systemic osteoporosis and hypotrophy of muscle tissue. The results of conservative treatment of such fractures often give unsatisfactory results [1,3].

Treatment of intra-articular comminuted fractures of the distal end of the humerus always remains a problem, since, after treatment of such complex fractures, it leads to frequent complications: flexion-extension contractures, nonunion of bone

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fragments, and even in rare cases leads to ankylosis [2,5]. The number of complications is still high and reaches 20-30% [1].

To prevent such terrible complications, it was necessary to create ways to solve this problem. Intra-articular comminuted fracture of the distal end of the humerus remains a problem for traumatologists. With a comminuted intra-articular fracture of the distal end of the humerus, most cases fail to close reduction or insufficient external fixation makes conservative treatment difficult. Because of what we resort to surgical treatment.

ANALYSIS AND RESULTS From 2014 to 2018, 79 patients with closed fragmental intraarticular fractures of the distal end of the humerus were treated at the Samarkand Regional Hospital of Orthopedics and the Consequence of Injuries from 2014 to 2018. Of these, by gender, 39 (47%) men, 42 (53%) women. All patients underwent an X-ray examination, and methods of surgical treatment were determined on the basis of the X-ray. To study the effectiveness of the chosen treatment method, the patients were divided into 3 groups:

In group I, 17 (21.5%) patients underwent surgery to compare bone fragments with fixation with Kirschner wires and external immobilization with a plaster cast.

In group II, 23 (29.2%) patients underwent open comparison of bone fragments with fixation with Kirschner wires and external fixation with the Ilizarov apparatus.

In group III, 39 (49.3%) patients, an open comparison of bone fragments was carried out by fixation with reconstructive plates from the medial and lateral sides.

The principle of surgical treatment is stable fixation of a multi-fragmented intra-articular fracture of the distal end of the humerus. To do this, the elbow joint is exposed by the posterior approach and a transolecrane osteotomy is performed. Which is carried out under a pneumatic tourniquet, exposure of the fracture site. First, bone fragments of the articular surface are compared and temporarily fixed with knitting needles. Then it is fixed on the medial, and then on the lateral side of the distal end of the humerus with the help of reconstructive plates covering the middle third of the diaphysis of the humerus. The plates are fixed with powerful screws. The stability of fixation is immediately checked and at the same time the function of the joint is determined. After the operation, a control radiography is performed in 2 x - projections. The surgical wound is sutured in layers, aseptic dressing and external fixation in the middle physiological position with a plaster cast. Plaster cast from the base of the metacarpophalangeal joint to a healthy scapula for a period of one month.

The results of the study showed: Group I in 17 patients who underwent fixation of bone fragments using Kirschner wires. Their fusion lasted up to 5 months, of which in 5 cases (29%) the wire osteomyelitis was a complication. Almost 16 patients (34%) were complicated by contracture, which for a long time were forced to receive physiofunctional treatment. Of these, 2 patients (12%) were complicated by nonunion of bone fragments, which were reoperated.

Group II - patients in whom fragments were compared in an open way and fixed with Kirschner wires, external fixation in the Ilizarov apparatus in 2 patients (9%) there was inflammation around the wire, reparative regeneration of bone fragments lasted more than 4 months. After the removal of the Ilizarov apparatus, almost all patients had persistent flexion-extension contractures, which received physiofunctional treatment for a long time.

Group III patients who, after open reduction of fragments in the area of the distal end of the humerus, underwent internal fixation with a plate and screws, the function of the elbow joint was restored 30 days after the operation, and bone consolidation occurred primarily after 65-70 days, the function of the joint was restored. Complications after the operation were not observed.

CONCLUSIONS. The analyzes performed showed that patients of groups I-II were treated for a long time. The method of fixation with wires did not sufficiently hold the bone fragments, micromovement was observed. Because of this, the results of treatment did not satisfy patients and attending physicians. Group III patients in whom bone fragments were fixed with reconstructive plates and with screws showed very successful results: bone fragments are fixed stably; the function of the elbow joint is restored within a month after surgical treatment; on the part of soft tissues and bone tissues, inflammation was not observed; the ability to work was restored in 2-2.5 months after the operation. The latter method of treatment showed the feasibility and effectiveness of treatment for intra-articular multi-comminuted fractures of the distal end of the humerus.

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