

Results of Surgical Treatment of Patients with Ankle Fractures.

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Ankle fractures are one of the most common injuries of the musculoskeletal system and account for 20-24% of all skeletal injuries and 40-60% of shin fractures; 60-80% of ankle fractures are unstable and are accompanied by mixing of fragments, dislocations and subluxations of the foot. (1,2,3,5)

Fractures of the ankles in 60-70% of cases are detected in people of working age. Despite the constant improvement of methods of surgical and conservative treatment of fractures of this localization, the number of unsatisfactory results varies according to various sources, from 5 to 40%. (1,2)

The incidence of disability in patients with ankle fractures remains high, from 3.1 to 39%. (2,3,4)

Purpose of the study: to analyze the results of surgical treatment of patients with injuries of the ankles of varying severity.

Material and methods.

The study group included 62 patients with injuries of the ankle joint who were treated in the period 2018-2019.

The ages of the patients ranged from 21 to 72 years, the median age was 46.5 years. There were 41 men (66.1%) and 21 women (33.9%). Persons of working age predominated 47 (75.8%).

Patients in the admission department underwent standard radiographs in 3 projections: pre-posterior, anterior-posterior with internal rotation in the hip joint by 20-30° and lateral

projection. Radiography in these projections was also performed the next day after the operation and in dynamics at follow-up examinations 1, 3, 6 and 12 months after the operation, as well as after removal of the metal structures.

Physiotherapy procedures included the following methods: paraffin (ozokerite) application - 10 sessions; in order to reduce tissue edema in the operated area - UHF No. 8-10 sessions. For the purpose of the analgesic effect was used - amplipulse - No. 10 sessions.

In order to restore painless movements in the operated joint, passive gymnastic exercises are recommended: flexion, extension, rotational movement in the ankle joint.

Exercises for the operated limb were carried out: active movements of the toes, movements in the ankle joint, which patients must perform independently. The duration of the sessions was 30 minutes, the course of 10-12 sessions was massage which was carried out to the patients according to the suction technique, using all techniques in combination with passive and active movements. The duration of the session is 15 minutes per day, the course of treatment is 15 procedures.

When making the diagnosis, the AO / ASIF classification was used. According to the types of fractures, the patients were distributed as follows:

B2. Fracture of the fibula with rupture of the tibiofibular syndesmosis + deltoid ligament - 20 (32.2%) patients.

B3. Chrezyndesmosis fracture of the fibula with a fracture of the medial malleolus - 17 (27.4%) patients.

C1. Supersmoticdiaphyseal fracture of the fibula with a fracture of the medial malleolus - 16 (25.8%) patients.

C2. Fracture of both ankles with rupture of the deltoid ligament in 9 (14.6%) patients.

In the treatment of patients with fractures of the ankles, open reduction of internal fixation with extra-bone metal structures was used. In 13 (21%) patients, a plate was used to fix the fibula; bones.

In case of injuries to the medial bone fragment of the tibia in 16 (25.8%) cases, it was fixed with two lag screws, one of which was inserted through the medial fragment into the tibia at right angles to the fracture line, the other through the apex of the inner malleolus from bottom to top in an oblique direction.

Osteosynthesis of the external ankle and revision of the ligaments of the tibiofibular syndesmosis were performed in 9 (14.6%) patients with two-malleolar fractures after open reduction; in patients with complete rupture, they were fixed with a tie bolt, then reposition and osteosynthesis of the internal ankle were performed through an additional incision. After osteosynthesis, immobilization with a removable plaster cast and physiotherapy were carried out for 3 weeks in order to create optimal conditions for the healing of the soft tissue components of the ankle joint.

Treatment results.

The analysis of treatment of 62 patients with ankle fractures was carried out. In terms of 1 to 3 years. The assessment was carried out on the basis of the data of an objective clinical and X-ray examination.

An excellent result - no pain, normal walking, return to the previous way of life. Objective assessment: absence of edema, deformities, restoration of movements in the ankle joint.

On radiography, complete restoration of the anatomical congruence of the ankle joint.

A good result is minor pain with prolonged walking or with excessive exertion.

Objective assessment - loss of range of motion in the ankle joint up to 10 degrees. On the roentgenogram - restoration of the anatomical congruence of the ankle joint, minor phenomena of deforming arthrosis.

Satisfactory result - mild pain after walking and with a load on the legs, the appearance of minor edema in the ankle joint in the evening. Objectively - restriction of movements in the ankle joint more than 100-150 degrees with dorsiflexion up to 90°. On the roentgenogram - the phenomenon of deforming arthrosis with a slight violation of the anatomical congruence of the ankle joint. Unsatisfactory result - intense pain when walking or with exertion, walking with restraint, walking with a cane.

Objective assessment - persistent edema in the ankle joint, deformity with loss of range of motion in the joint more than 20°, stiffness in the ankle joint.

On the roentgenogram - anatomical congruence disorder in the ankle joint, the phenomenon of deforming arthrosis and post-traumatic flat feet.

Out of 62 patients examined in the long term, 14 (22.5%) evaluated the treatment result as excellent, in 39 (63.0%) - as good, in 8 (13.0%) - as a satisfactory result. Unsatisfactory result of treatment in 1 (1.5%) patient.

The greatest number of satisfactory and unsatisfactory results were obtained in bicalleolar displaced fractures with destruction of the anatomical congruence of the articular surfaces.

Findings.

1. Analysis of the results of treatment of patients with intra-articular fractures of the ankle joint showed that the outcomes of treatment depend on the type and nature of damage, the quality of reposition of bone fragments with restoration of congruence in the ankle joint. Satisfactory and unsatisfactory results were obtained in case of two-malleolar intra-articular fractures with destruction of the articular surfaces of the ankle joint.

2. A complex of rehabilitation treatments on an outpatient basis to increase the effectiveness of rehabilitation measures, ensure early restoration of joint function and improve the favorable results of treatment.

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