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RESULTS OF TREATMENT OF CHILDREN AND ADOLESCENTS WITH DAMAGES TO THE ANKLE JOINT

Teshaev Temur Ne'matovich

assistant of the department.

Hakimov Saidjon Sodiqjon o'gli

clinical resident.

Sobirov Og'abek Sobir o'gli

clinical resident.

Xabibullayev Islomjon Ikromjon og'li

clinical resident.

Samarkand State Medical University.

Abstract: During the period 2020-2024, 32 injured with injuries to the ankle joint of I-III-degree severity were treated.

Conservative treatment methods were used in 25 patients (78%), and osteosynthesis was performed in 7 patients. Of these, 4 (12,5%) patients underwent transarticular fixation with Kirschner spokes, and 3 (9,5%) were fixed with a tightening bolt.

Long-term treatment outcomes within 2-4 years were studied in 32 (100%) patients. After conservative treatment, good results were noted in 22 (68,7%) patients, satisfactory in 8 (25%), and unsatisfactory in 2 (6,3%). A comparative analysis of treatment methods revealed that fixing bone fragments with Kirschner's spokes is effective in patients with lower tibial syndesmosis.

Keywords: ankle joint, lower tibial joint injury, conservative treatment, osteosynthesis.

Relevance. Diagnosing and treating injuries to the ankle joint with rupture of the lower interosseous joint remains a pressing and challenging task for traumatology to this day. The ankle joint injuries account for over 20% of all skeletal injuries, and the fractures of the lower leg bones account for 40-60%.

Numerous experimental and clinical studies confirm the dependence of treatment outcomes for victims with pronational and supinational fractures of the distal segment of the lower leg on the anatomically accurate restoration of the "forks" of the ankle joint and the method of fixation [1,2].

Purpose of the study: to assess the effectiveness of treatment of affected children and adolescents with various degrees of ankle injury.

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Material and methods: The study group included 32 patients aged 13 to 17 years, who were treated during the period 2020-2024. Of the 32 patients, 27 (84.4%) were boys and 5 (15.6%) were girls.

In terms of the localization and nature of the ankle joint injuries, first place was occupied by a contusion with isolated rupture of the lower interosseous syndesmosis in 13 (40%), fractures of the outer ankle with rupture of the interosseous syndesmosis in 9 (28%), fractures of the inner ankle with partial damage to the interosseous syndesmosis in 3 (9%). Rupture of the deltoid ligament with fracture of the lower third of the tibia - 7 (22%)

The high proportion of injuries to the interosseous joint due to the indirect impact of the traumatic force was explained by the prevalence of sports and pedestrian injuries.

Based on anamnesis data, clinical and radiological studies, three variants of the ankle joint injury mechanism have been established: pronation-abductional, rotational, and supination-adductional. Pronotional-abductive and rotational types of injuries prevailed. The first degree of tibial joint damage was diagnosed in 17 (53.1%) patients, the second degree in 9 (28%), and the third degree in 6 (19%).

Conservative treatment methods were used for ankle fractures with I-II-degree tibial joint rupture - in 25 (78%) patients. After successful repositioning, a U-shaped splint bandage is applied to the lower third of the thigh, secured with gauze bandage, and a control radiograph is taken. If the fragments are in satisfactory condition and the color of the toes is normal, the longeta is secured with a plaster bandage, and patients are discharged for outpatient treatment after 6-8 days. The plaster immobilization continues for 5-7 weeks. In 4 (12,5%) patients with a fracture of the lateral malleolus and rupture of the anterior interosseous ligament, osteosynthesis was performed using Ilizarov spokes, including

All patients after osteosynthesis within 3-4 weeks. Immobilization with removable plaster splint and physiotherapeutic treatment were performed to create normal conditions for the healing of the postoperative wound in the ankle joint.

Results and discussion: treatment outcomes were assessed as good, satisfactory, and unsatisfactory. Good result: no complaints, the ankle joint shape is correct, movements in the finger volume or limited to the dorsal side by no more than 100, on the radiographs of the ankle joint, the correct proportions of components in the fracture zone are determined - fusion with bone restructuring, patients maintain their daily life, walk in regular footwear or sole.additional transarticular fixation using Kirschner 2 specialists. Interlobar syndesmosis in 3 patients (9,5%) was fixed with a tightening bolt.

Satisfactory result: complaints of slight pain in the ankle joint and swelling that appear at the end of the day or with prolonged exertion, joint movements are limited to no more than 200, on the radiograph - correct relationship of the components of the ankle joint, on the radiograph - fusion. In some cases - the initial stage of deforming arthrosis of the ankle joint. Unsatisfactory result: complaints of constant pain and pronounced swelling, pain and limited movement (25-400 times) in the ankle joint area, patients walk limply, on the radiograph - signs of deforming arthrosis or non-union of fractures or divergence of the interosseous joint.

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Long-term results of conservative treatment from 2 to 4 years were observed in 26 (78%) patients. Good results were noted in 22 (70%) patients, satisfactory - in 2 (6,2%) patients. Unsatisfactory - in 2 (6,2%) patients. Patients with satisfactory and unsatisfactory results were recommended surgical treatment.

In the period from 2 to 4 years (all patients had their metal structures removed), all 7 (19%) patients were examined after surgery. Deforming arthrosis of the I-II degree was diagnosed in 2 (6,2%) patients.

Conclusions: a comparative analysis of conservative and surgical treatment revealed that surgical treatment using metal structures excludes the possibility of secondary displacement of bone fragments and displacement of the «forks» of the ankle joint. Fixing bone fragments with Kirschner's (or Ilizarov) spokes is ineffective in patients with lower tibial syndesmosis.

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