

EXPERIENCE IN SURGICAL TREATMENT OF LIGAMENTOUS RUPTURES OF DISTAL INTER-TIBIAL SYNDESMOSIS.

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Relevance. One of the most frequent pathologies in the practice of a traumatologist-orthopedist is damage to the ankle joint, accounting for up to 20 % of injuries to the musculoskeletal system. The frequency of ankle ligament injuries among people of working age ranges from 12% to 40%, severe ankle fractures with damage to the deltoid ligament and rupture of the distal inter-tibial syndesmosis in 30% of cases result in unsatisfactory results [1]. According to statistics, the occurrence of ankle fractures is on average 100-120 cases per 200 thousand. population per year. From 54.1 to 84.6% of ankle fractures with a rupture of the MBS occur in young and able-bodied people [1-3]. According to a number of authors, damage to the ring in two places, which can be represented by either a fracture of both ankles, or a fracture of one ankle and a rupture of one of the ligament groups, is unstable and accounts for 15% of ankle fractures. In this group, the above scientists also include all two-and three-ankle fractures, taking into account the fact that ligament damage is the equivalent (often more severe) of an ankle fracture. In the conservative treatment of patients with ankle fractures accompanied by a rupture of the MBS, unsatisfactory results occur from 6.6 to 23.4 % of cases. This is due to the fact that after a closed manual reposition of the fragments of the ankles and their external fixation with plaster or polymer dressings, the displacement of the fragments and diastasis between the tibia in the MBS area often persists [6,7]. Domestic and foreign authors believe that after the surgical treatment of ankle fractures with a rupture of the MBS, from 24 to 52% of cases of diastases between the tibia in the MBS cannot be eliminated, the need for repeated surgery occurs from 2.1 to 20% of cases [4,5]. Currently, external fixation devices are actively used to restore the function of the ankle joint in case of ligament ruptures of the distal inter-tibial syndesmosis, which allows you to get good results. However, the trans osseous method has a certain limitation of use in terms of the time that has passed after the injury, it is used for injuries that are no more than 2 months old [2]. Currently, the priority method of treatment of ankle fractures with a rupture of the MBS is surgical. For osteosynthesis of fractures in the area of the ankle joint, a large number of metal fixers of various designs have been developed and implemented in practical healthcare. According to Russian researchers, the frequency of surgical treatment of ankle fractures with MBS rupture ranges from 39.1 to 63.1 % of patients [8]. In recent years, in the surgical treatment of ankle fractures with a rupture of the MBS, stabilization of the MBS with a positional screw has become widespread. As a positional screw, some authors use a cortical screw with a diameter of 3.5 mm, others-4.5 mm [9]. Despite the achievements of medical science in recent decades, the introduction of various new technologies in traumatology, patients with fractures of the ankles with a rupture of the MBS often have unsatisfactory treatment results, which often leads

to their disability. This causes significant economic damage to society, and determines the medical and social relevance of this problem.

The purpose of the work. Analysis of the results of stable – functional osteosynthesis for torn ligaments of the distal tibiofibular syndesmosis.

Material and methods. For the period 2017-2020, 83 patients with fractures of the ankles and torn ligaments of distal interbertal syndesmosis were treated in the Department of Traumatology of the Samarkand branch of the RSNPMCTO, who underwent surgical treatment. Of these, 52 (62.6%) were male and 31 (37.4%) were female. Right-sided injuries in 35 (42.2%) and left-sided injuries in 48 (57.8%) patients. The following research methods were used: clinical, X-ray (including CT and MRI).

Depending on the type of ankle fracture and ligament rupture of inter-tibial syndesmosis, we used a differentiated approach to the tactics of recovery of stabilization of ankle fractures and recovery of inter-tibial syndesmosis. Osteosynthesis of the medial ankle, in which preference was given to the Weber method of fixation with screws (plates). Metal screws were used for fractures of the outer ankle. In case of rupture of the anterior fibula – tibial ligament (type B fracture), a strained wire suture was used in the area of the anatomical location of the ligament. In case of ruptured ligaments of inter-tibial syndesmosis-fixation with the help of fixators for intraosseous osteosynthesis.

The operation is performed as follows. The patient is placed on the operating table in the supine position under the wire "spinal" anesthesia on ankle joint, produce arcuate incision of soft tissues facing the base to the fibula, peeled layer by layer of skin and subcutaneous presence of periosteal flap, and reveal a distal fibula. First drill with a drill a bed for the introduction of the lock that contains the rod, which is installed inside the bones in the area of the syndesmosis assembled, then set the end of the rod with a threaded portion and a pointed head in the metaphyseal division of the ankle on the projection of the syndesmosis, which improves stabilization, then put on bushing and tighten the nut and using the key, which is inserted into the second end of the locking pin with the groove in the groove tighten and strengthen the retainer to increase the stability of fixation. The thread on the sleeve prevents the displacement of bone fragments. When the first fixator for the intraosseous nut is screwed on, the bones approach each other, and the inter-tibial diastasis is restored. And then a second nut is screwed on to stabilize the fragments, eliminate dislocations, and compress the bone fragments. The wound is sewn up in layers.

Clinical example 1. Patient A. 34 years old. D-z: fracture of the n / 3 fibula, rupture of the inter-tibial syndesmosis.

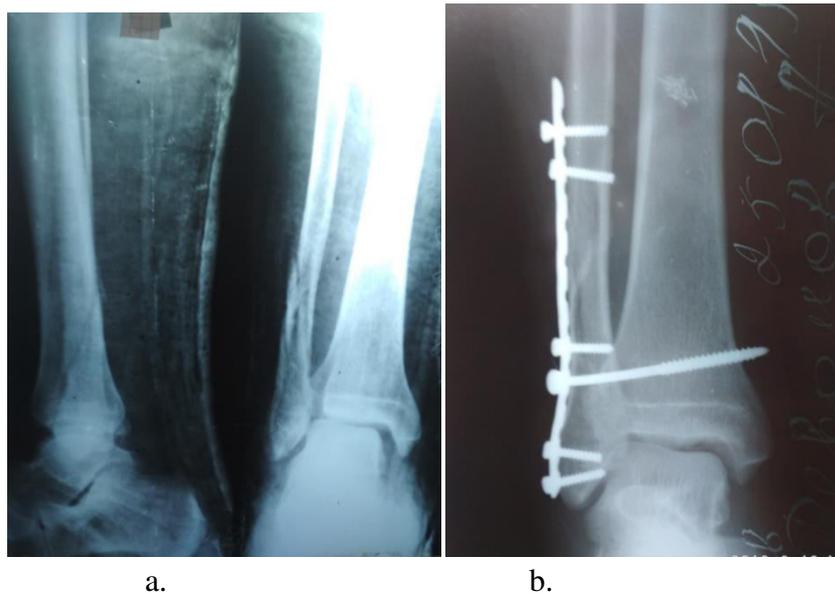


Figure 1. Radiograph of the patient A. a-before the operation; b-after the operation.
Clinical example 2. Patient N. 43 years old. D-z: dislocated fracture of both ankles, rupture of the inter-tibial syndesmosis.

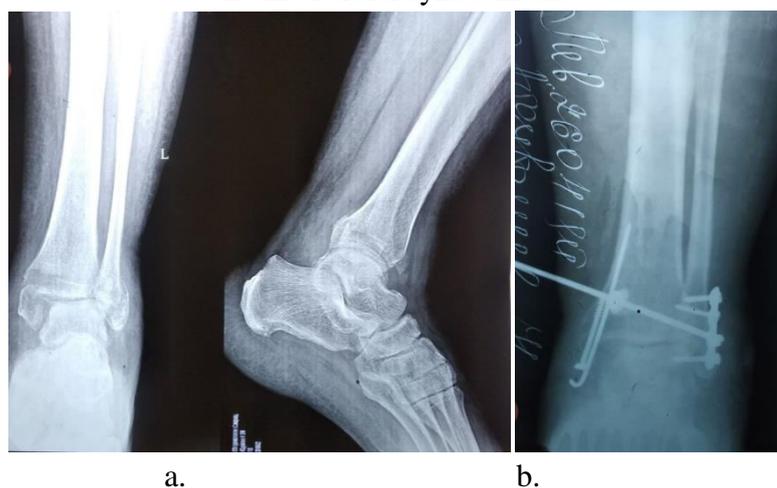


Figure 2. Figure 1. Radiograph of the patient N. a-before the operation; b-after the operation.

Results and discussion. The analysis of the treatment results was carried out using clinical and radiological methods. The results were evaluated by the severity of the pain syndrome, the amplitude of movements in the ankle joint, the condition of the joint and the degree of daily household activity. The maximum score (100) on this scale corresponds to a healthy ankle joint. Good and excellent results in the assessment after 6, 12 months (>70 points) were obtained in 56 patients, which was 57.4%, satisfactory results (50-69 points) were observed in 26 (31.3%). The use of self-fixing and self-compressing fixators for intraosseous osteosynthesis is optimal. The self-compressing retainer is self-fixed in the bone, preserving the intraosseous position of the bone fragments achieved during the operation until they fuse. The use of an intraosseous retainer allows for its physiologically necessary mobility during movements in the joint (1.5 ± 0.2 mm outward, 2.0 ± 0.2 mm posteriorly), essentially replacing the torn inter-tibial ligaments. Thus, a comparative analysis of various methods of fixation of bone fragments and inter-tibial syndesmosis revealed that elastically stressed self-compressing intraosseous osteosynthesis with

the use of a self-tightening fixative is not inferior in efficiency to standard methods of osteosynthesis (according to the method of M. E. Muller et al.), and in terms of the recovery time of function exceeds them.

Conclusion. Treatment of distal inter-tibial syndesmosis with the use of a fixator for intraosseous osteosynthesis ensures the restoration of the function of the ankle joint and the support capacity of the affected limb with the return of patients to work, including physical work. The use of the fixator allows you to control the process of eliminating syndesmosis during surgery, prevents the possibility of relapses, and provides early functional load of the operated limb.

REFERENCES:

1. Gafurov F. A., Eranov Sh. N., Ahtamov A. A., Holbekov T. B. Results of early diagnosis of congenital hip dysplasia in newborns and infants. - Youth and medical science in the XXI century, 2019. 380-381.
2. Mikhailov S. V., Hominets V. V., Shakun D. A., Shchukin A.V., Fshschs I. V., Komarov A.V. Surgical treatment of the insolvency of distal interbertal syndesmosis after an ankle fracture. The Bulletin of contemporary clinical medicine. 2019 Volume 12, issue 3 78-82.
3. Pankov I. O., Salmkhov R. Z., Nagmatullin V. R. Modern methods of surgical treatment of non-repaired ligament ruptures of the distal inter-tibial joint. Practical medicine 4(80) 2014 / volume 2 100-103
4. Fomin N. F., Ovdenco A. G., Najafov R. A. O., Bogdanov A. N. Features of damage to distal inter-tibial syndesmosis in patients with pronation fractures of the ankle joint // Traumatology and Orthopedics of Russia. 2010. No. 2. S. 22-26.
5. Hominets, V. V. Fractures of the distal part of the shin bones (mechanism, diagnosis, principles of conservative and surgical treatment) / V. V. Hominets, S. V. Mikhailov, V. M. Shapovalov. - 2nd ed. - St. Petersburg: Sintez Buk, 2016 – - 168 p.
6. Eranov Sh. N., Ahtamov A. A., Islomov T. Sh. Complex treatment of osteochondrophyte of the femoral head in children. The young and the medical science of the XXI century, 2019. 397-398.
7. Tilyakov Kh.A. Surgical treatment tactics for patients with combined pelvic and femoral injuries International Journal of Pharmaceutical Research / Jan-Mar 2020/ Vol 12/ Issue 1 Indian 1255-1258
8. Valiev E.Yu., Valiev O.E., Azizov A. M., Tilyakov H. A., Experience In The Treatment Of The Elderly And Additional Patients With Fractures Of The Femoral Neck With Account Of Comorbidal Pathology European Journal of Molecular & Clinical Medicine ISSN 2515-8260 Volume 07, Issue 07, 2020
9. Tilyakov A. B., Tilakov B. T.,Tilyakov Kh. A., Our experience of surgical treatment of unknown fractures and false joints of the shin bones European Journal of Molecular & Clinical Medicine ISSN 2515-8260 Volume 07, Issue 09,2020
10. Eranov S.N., Eranov N.F. Experience of surgical restoration of annular ligament with dislocations of radial bone head in children. Ж. Достижения науки и образования №6 (60), 2020 74-76.

11. Pelton K., Thordarson D.B., Barnwell J. Open versus closed treatment of the fibula in Maisonneuve injuries // *Foot Ankle Int.* 2010. V. 31. P. 604-608.
12. Swords, M.P. Late treatment of syndesmotic injuries / M.P. Swords, A.K. Sands, J.R. Shank // *Foot Ankle Clin.* – 2017. – Vol. 22 (1). – P.65–75.