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MODERN TECHNOLOGY OF TREATMENT OF PATIENTS WITH CICATRICAL DEFORMITIES OF THE FOOT AND ANKLE JOINT

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Abstract
This article gives detailed information on how deformities of the foot and ankle joint are treated nowadays. In this article analysis on the factors rendering this case common are mentioned and pertinent solutions to avoid it have been provided.

Keywords: medicine, deformity, device, injection, patient, scar, rehabilitation, vitamin, tissue, blood, surgery.

Introduction

The steadily developing pace of modern medicine places increased demands on therapeutic approaches, in particular the reconstruction of damaged anatomical structures that provide subtle kinematic reactions, which are necessary tools for early household, social and professional reintegration of patients. The plastic properties of the selected graft during the reconstruction of the soft tissues of the foot, as an organ of movement bearing the load of the body, must also meet the increased requirements. In this regard, traditional methods and methods of reconstructive plastic surgery have somewhat lost their positions over modern methods and methods of soft tissue reconstruction. When choosing a plastic material to close extensive soft tissue defects in recent years, many authors prefer blood-supplied flaps with an axial type of blood supply, in describing which we use the term "functional flaps". Currently, the choice of tactics in the surgical treatment of patients with extensive defects and scar deformities of the posterior part of the foot is made taking into account the available arsenal of surgical methods and methods of a particular surgeon. At the same time, the nature and extent of the damage, the limitation period of the injury, the degree of possible violations of the sliding structures of the foot and the biomechanical properties of the selected graft are rarely taken into account.

We consider the method of choice in the treatment of foot deformities to be the method of G.A. Ilizarov using transosseous osteosynthesis, which allows to effectively eliminate all components of deformities. However, the peculiarities of the use of spoke transosseous osteosynthesis (bulkiness of structures, high density of the apparatus installation, the need for constant monitoring of the tension of the spokes, a decrease in the rigidity of fixation during the correction of deformities, leading to a large number of specific complications) caused the search for more advanced osteosynthesis schemes to correct the pathology in question while preserving the advantages of the method.

In the course of experimental anatomical-surgical, mathematical, biomechanical studies, we proposed various original schemes of rod and spoke-rod transosseous fixation to eliminate foot deformations, protected at the level of patents of the Russian Federation, using parts from a commercially available set of G.A. Ilizarov apparatus. Rods of the Shteiman and Schantz type with a diameter from 3.5 to 5 mm

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were used as osteofixers, the choice of which depended on the patient's age and the level of implementation. Rods by manual screwing with a handle assembled by the Ministry of Health of the G.A. apparatus parts. Ilizarov, taking into account the planes of deformation, was installed in the middle part of the foot, the talus and heel bones, in the metaphysical parts of the lower leg. The rods were fixed by means of brackets into external supports, which were positioned perpendicular to the planes of deformation, and then spoke clamps were carried out in the plane of the supports crosswise to the rods. We have been using the developed methods of osteosynthesis since 1998 in the treatment of children and adolescents aged 3 to 14 years with foot deformities of various origins. In children aged 3 to 6 years, the deformity is eliminated closed in an external fixation device, in patients older than 6 years - depending on the type and severity of the deformity using various osteotomies of the foot by growing bone regenerates of the required shape and size in the postoperative period. After hypercorrection of the deformation components was achieved, the fixation stage in the apparatus was started for a period of 4-6 weeks, after which the apparatus was dismantled, followed by the application of a circular granite plaster cast for a period of 6-8 weeks.

In the course of treatment of patients with neurogenic deformities of the feet (consequences of cerebral palsy) in the postoperative period, we additionally include drug correction as part of cortexin, actovegin, injections of nicotinic acid, vitamins of group B. The stage of physiofunctional rehabilitation is performed using original manual therapy techniques.

The use of the developed combined schemes of transosseous osteosynthesis in order to correct various deformities of the feet allowed: to ensure adequate rigidity of fixation for the entire period of treatment in the device using fewer osteofixers and metal structures, which simplified the process of osteosynthesis, reduced the density of the installation of the device, its bulkiness; to reduce the number of specific complications compared with the use of spoke arrangements of the device by 2.3 times.

Tactics of treatment of patients with deformities of the feet of various genesis and severity, including the stage of surgical correction using original needle-rod schemes of transosseous osteosynthesis, the stages of plaster immobilization and physiofunctional rehabilitation using manual therapy techniques, drug correction of the condition of the myoneural apparatus of the lower leg allowed to achieve positive treatment outcomes in 94.3% of cases.

Nevertheless, an analysis of modern Russian literature suggests that there is a general tendency to increase the proportion of early closure of extensive soft tissue defects of the extremities with blood-supplied soft tissue flaps, including on the basis of microsurgical techniques. So, Rodomanova L.A. and Kochish A.Yu., having conducted a comparative analysis of two groups of patients, a total of 594 people, believe that the tactics of early reconstructive surgical interventions using microsurgical operations even before the formation of scar tissue is justified due to the fact that the proportion of multi-stage surgical interventions, disability decreases, treatment time is shortened and the chance of a more complete restoration of lost functionality increases limbs. Sysenko Yu.M., in the treatment of patients with open fractures of the forearm and shoulder bones, in 24.4% of cases, plastic replacement of extensive soft tissue defects with blood-supplied tissue complexes, both in free and non-free execution, was used in the early period after injury. Being supporters of radical primary surgical treatment,

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Minasov B.Sh. with co-authors and Trufanov I.M. with co-authors believe that a soft tissue defect formed after surgical treatment of a wound should be closed in the coming period after injury. Employees of RNIITO named after R.R. As a result of a comprehensive study, it has been proven that the plastic closure of extensive soft tissue defects of the extremities should be carried out within up to six weeks from the moment of injury and only with the use of blood-supplied tissue complexes.

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