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STABILIZING OPERATIONS ON THE ANKLE JOINT

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✓ *Resume*

Improving surgical methods of treating patients with advanced stages of OA is one of the priorities in modern traumatology. Today, arthrodesis of the ankle joint, as mentioned above, is considered the "gold standard" for the treatment of this stage of OA. On the other hand, the number of patients undergoing joint replacement is increasing annually. Scientific research shows that both methods have their advantages and disadvantages, but their results vary. So far, the choice is for arthrodesis. At the same time, various approaches to GSS stabilization are used.

Keywords. *osteoarthritis of the ankle, post-traumatic osteoarthritis of the ankle, injuries related to the ankle joint.*

СТАБИЛИЗИРУЮЩИЕ ОПЕРАЦИИ НА ГОЛЕНОСТОПНОМ СУСТАВЕ

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✓ *Резюме*

Совершенствование оперативных методов лечения пациентов с поздними стадиями OA является одним из приоритетных направлений в современной травматологии. Сегодня артродез голеностопного сустава, как указывалось выше, считается «золотым стандартом» лечения этой стадии OA. С другой стороны, количество пациентов, которым проведено эндопротезирование суставов, ежегодно увеличивается. Научные исследования показывают, что оба метода имеют свои преимущества и недостатки, но их результаты различаются. Пока выбор за артродезом. При этом используются различные подходы к стабилизации ГСС.

Ключевые слова. *остеоартроз голеностопного сустава, посттравматический остеоартрит голеностопного сустава, травмы, связанные с голеностопным суставом.*

ОШИҚ БОЛДИР БЎГИМИНИНГ СТАБИЛЛАШАДИГАН ОПЕРАЦИЯЛАР

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✓ *Резюме*

Ошиқ болдир бўгимининг стабиллашадиган операцияларнинг илгор босқичлари бўлган беморларни даволашининг жарроҳлик усусларини таомиллаштириши замонавий травматологиянинг устувор йўналишиларидан биридир. Бугунги кунда ошиқ болдир бўгимининг артродези, юқорида айтиб ўтилганидек, жароҳолик усулуда даволаши ушибу босқичини "олтин standart" ҳисобланади. Боиқа томондан, бўгимларни алмаштирадиган беморлар сони йил сайин ортиб бормоқда. Илмий тадқиқотлар шуни қўрсатади, иккала усул ҳам ўзларининг афзаликлари ва камчиликларига эга, аммо уларнинг натижалари турлича. ҳозирча танлов артродез учун. Шу билан бирга, ошиқ болдир бўгимининг стабилизациясига турли хил ёндашувлар қўлланилади.

Калит сўзлар: *оёқ ошиқ болдир бўгимининг остеоартрити, оёқ ошиқ болдир бўгимининг травмадан кейинги остеоартрити, оёқ ошиқ болдир бўгим билан боғлиқ шикастланишилар.*

Relevance

Improving surgical methods of treating patients with advanced stages of OA is one of the priorities in modern traumatology. Today, arthrodesis of the ankle joint, as mentioned above, is considered the "gold standard" for the treatment of this stage of OA. On the other hand, the number of patients undergoing joint replacement is increasing annually. Scientific research shows that both methods have their advantages and disadvantages, but their results vary. So far, the choice is for arthrodesis. At the same time, various approaches to GSS stabilization are used. The success of GSS arthrodesis lies in the observance of several key principles, including adequate bone contact, interosseous compression and stability in the area of bone contact. Equally important is the choice of a fixation method for the fusion of elements of the tibia and talus in the framework of arthrodesis. Common fixation methods include immersion osteosynthesis (screws, plates, intramedullary pins) and external fixation devices. The use of external fixation technology of GSS arthrodesis using the Ilizarov apparatus is a perfect method of applying external fixation. It is indicated primarily for orthopedic complications of rheumatoid arthritis, correction of a large angle of deformation, non-fusion, purulent infections of limb shortening, etc. analyzed 20 clinical data from a group of patients with GSS arthrodesis who were treated with infection or bone defects using an Ilizarov external fixation device. He found that in 91.7% of cases, postoperative fusion occurred, and in 8%, fibrous ankylosis formed [2.4.6.8].

The purpose of the study: study of modern methods of treatment of patients with osteoarthritis of the ankle joint.

The object of the study: There were 124 patients aged 35 to 65 years with osteoarthritis of the ankle joint.

Results and analyses

At the same time, 75% of patients developed a local infection in the area of the entrance of the spokes, and 8% had varus deformity of the foot. Another study, which used Ilizarov's device to treat 37 patients with chronic HCV infection, showed that fusion reached 94.6% after surgery. In 7 cases, the posterior part of the foot had a residual clubfoot deformity within 10°; in one case (2.7%), varus deformity of the foot was observed at 10°, and in the other two cases (5.4%), the foot had a hallux valgus deformity at 10°. In the study, arthrodesis was performed using bone grafting, osteotomized fibula, and compression with Ilizarov apparatus in 23 patients suffering from osteoarthritis of the GCC. Fusion occurred in 95.6% of patients. Clinical results were excellent in 26.1%, good in 12 cases - 52.2%; satisfactory in three - 13.7% and poor in two - 8.7%. Subsequently, in the treatment of osteoarthritis using a combination of bone grafting and compression, the researchers achieved 100% fusion. However, infection occurred in eight cases. It should be noted that the use of Ilizarov's device in the treatment of the consequences of gunshot fractures gave an absolute result of bone fusion, but there were infectious complications of varying severity in half of the cases. We observed 11 patients who had neuropathy of the GCC area caused by diabetes. Scientists found that 91% of patients had joint fusion 16.1 weeks after surgery, and there were no serious complications. According to the research, 92% of cases using a triangular external retainer had a satisfactory clinical result. According to the data, this happened in 95.8% of cases and a satisfactory clinical result was obtained in all cases of OA after an ankle fracture, when a Taylor spatial frame was used as fixation. The use of an external Hofmann fixator resulted in satisfactory clinical results in 89% of cases [1.3.5.7.8].

Arthrodesis using submersible structures Screws and plates are most often used in ankle arthrodesis, as they provide stability and optimal compression between the tibia and talus, 20 cases of GSS arthrodesis with two compression screws were reported. 95% of patients developed ankylosis within four years after surgery. In addition, an internal fixation with four screws was used. In 99% of cases, everything worked out within 5.9 years after the operation. Of the complications, long-term wound healing was detected in 5%, and in 3.2% of cases, postoperative hematoma. The incidence of secondary osteoarthritis of the tarsal and talus-navicular joints was 17% and 11%, taking into account the fact that 30% and 19% of patients already had pathology before surgery. Arthrodesis of the ankle joint, fixed with three spongiotrophic screws, was performed in 23 patients with post-traumatic OA. Moreover, in 20 patients (88%), bones were successfully fused within 2.5 months, and in two (8%) within 4 months. In a single case (4%), incorrect fusion occurred due to screw migration. Thus, the use of immersion fixation in GSS arthrodesis ensures a high fusion coefficient with a low level of complications. Among them

there is a screw one, which many experts consider effective. However, it is difficult to determine whether the number of screws affects the fusion coefficient after arthrodesis. According to the study, in the treatment of GCC infections, arthrodesis using screws and 22 compression nails led to 89.5% of cases of joint closure 4.8 months after surgery, and infection relief reached 85%. A retrograde intramedullary nail can be used to treat clubfoot and orthopedic consequences of rheumatoid arthritis. In the case of Charcot's arthropathy, the fusion rate was 77.8%, and no serious complications were found after surgery. High rates were recorded in their studies. In 55 cases, intramedullary hallux valgus pins were used for GSS arthrodesis. Fusion was 96.3%, and short-term complications were 25%. Intramedullary nail technology can provide a positive result in rheumatoid arthritis. However, one third of the patients showed slow healing of the postoperative wound. Marrott proposed a method for endoprosthetics of the GSS. Severe joint diseases, which are accompanied by severe pain and limit the motor and supporting function of the joints, are indications for endoprosthetics. Nowadays, the results of the method do not always satisfy both patients and operating orthopedic traumatologists. Revision and repeated joint implantation operations have increased in recent years due to the increase in pain and instability of prosthetic components. According to some studies, the frequency of revisions is 4-28%. After primary knee replacement, the incidence of moderate pain and unsatisfactory results is approximately 13% one year later and up to 20.5% by seven years after surgery. Thus, in clinical practice, GSS endoprosthetics are approached very cautiously. According to the German ERPD registry, only 1,300 endoprostheses are installed in Germany per year, and arthrodesis operations are performed three times more often.

There is evidence that the main indications for ankle replacement are tumorous lesions of the 23 tibia or talus bones, defects of the talus bone, varus or valgus deformities over 20°. GSS arthroplasty is undoubtedly a promising functional alternative to arthrodesis surgery today. The number of GPS replacement operations is increasing every year, and many foreign studies are devoted to their results. This is confirmed by the national registries of endoprosthetics in Europe and America. There are no such registers in the Russian Federation, which makes analysis difficult. Colleagues from Krasnodar analyzed the results of 26 operations. During the two years of follow-up, two patients (7.7%) had unsatisfactory results. The results of GSS endoprosthetics in 71 patients are described. Signs of instability were found in 6 patients (19.4%) during the first year. When analyzing the treatment results, loosening of the implant components was observed in 16 patients (40%). In this study, the average annual survival rate was 85.7 percent. As a result, GSS arthroplasty has been recognized as effective in the treatment of pain and restoration of function, but not long-lasting enough. Joint replacement allows you to maintain and increase the amount of movement in the GSS. The authors recommend carefully selecting patients for surgery in order to achieve the best results. It is worth considering the cost of operations, since arthrodesis is an effective method of treating pain syndrome, it is much cheaper, but it leads to a limitation of the range of movements and violations of the kinematics of gait. Arthroscopic minimally invasive ankle arthrodesis In 1991, Morgan spoke for the first time about the clinical use of ankle arthrodesis using arthroscopy and called it the arthroscopic arthrodesis method. We conducted a comparative analysis of the results of a similar operation. 24 33 people participated in the study and were divided into groups. In the first group there were 17 patients who underwent arthroscopic surgery, in the second group there were those who underwent open surgery. In each group, hollow 6.5 mm or 7 mm bandages were used for internal fixation. The results showed that the joint ankylosing time in the arthroscopy group averaged 8.7 weeks, and in the open intervention group — 14.5 weeks. Due to the use of arthroscopic technology instead of traditional GSS arthrodesis, the number of complications caused by surgical intervention decreased: seromas - by 18.5%, wound hematomas - by 23.3%, necrosis of surrounding tissues - by 17.5% and the frequency of phlebothrombosis - by 21.8%. In addition, it was possible to prevent the development of postoperative infection.

Conclusion

Arthroscopy reduced hospital treatment by 39% and disability by 17%. Thus, in the treatment of OA of the ankle joint at a late stage, arthrodesis with internal fixation is considered the best option. External fixation is still an effective and safe method of treatment for serious bone defects and extensive soft tissue injuries. When choosing surgical treatment for osteoarthritis, the stage of the disease and the results of the patient's examination should be taken into account.

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