

ON THE ROLE OF ANATOMICAL AND FUNCTIONAL DISORDERS OF THE FEET IN DEVELOPMENT IDIOPATHIC OSTEOARTHRITIS OF THE KNEE JOINT

Erkinov N.G., Asalov G.S.

Tashkent Medical Academy, Tashkent

ABSTRACT

Osteoarthritis (OA) of the knee joint is one of the most common degenerative diseases of the population of Uzbekistan and occupies a leading place among the causes of disability in people over 60 years of age. The rear two forms of knee joint OA: idiopathic and secondary. Idiopathic OA is the case when doctors do not know exactly the causes of the pathological process, which is more than 90%, and secondary – when the cause is known, and OA develops due to injuries or various diseases. As you know, according to the law of dialectics, the reared consequences for no reason. In this case, severe lesions of large joints, when the underlying cause is not established, are called the idiopathic form of OA. This name has become generally accepted among specialists and still no one doubts in term so fits revision. Treatment without taking into account etiological factors does not give the desired stable results, which dictates the need for a deeper study of the pathogenesis of this disease.

Keywords: Osteoarthritis, methods of therapy, hay fever, autohemotherapy, early diagnostics.

The purpose of the study. To study the role of anatomical and functional disorders of the foot in the development of idiopathic osteoarthritis of the knee joint.

Materials and methods of research. 79 patients aged 30 to 75 years were under clinical supervision, 57 of them were women, 22 men who applied for consultative polyclinic care for knee joint OA and static deformities of the feet. In patients, at first for no apparent reason or injury, pain 7 appeared in one and then in the other knee joint, later it gradually intensified and progressed, limitation of joint movement developed, crepitation and gait uncertainty appeared. Vagus curvature of the knee joint, pain syndrome at the level of the internal articular gap, difficulty walking and decreased ability to work were determined. A clinical examination revealed a deformity of the feet in the form of flat feet with a decrease in the height of the arches, deviations of the calcaneus and curvature of the toes, difficulty wearing shoes. As the deformities of the feet progressed, pain was observed in the foot and in the thickness of the shin muscles.

The deformity of the patients' feet, compared with the knee joint, was less disturbing, their main attention was paid to pain in the knee joint. At the same time, not a single patient noticed or complained about the shortening of the lower limb and did not correct the length of the legs. According to the indications, patients were prescribed clinical X-ray, laboratory examination, CT and MRI of the joints. Radiologically, a characteristic pattern of OA was observed, a narrowing of the articular crevices, more often on the medial side, and bony marginal osteophytes. At the same time, it was not possible to establish the causal factor of the development of knee joint OA. Patients repeatedly received conservative, sanatorium-resort treatment without much effect, and knee arthroplasty was performed in 8 patients without eliminating the pain syndrome. Clinical examination of the lower extremities showed the presence of a deviation of the longitudinal axis, deformity of the feet of varying severity and shortening of the length of one of the limbs in the range from 5 to 15 mm. In patients, the angle of aversion of the posterior part of the foot turned out to be more than 5, up to 10 degrees or more (with a norm of 5). Taking into account the presence of vague deviation of the knee joint, deformities of the feet with shortening of one of the limbs, all patients underwent correction of the feet, leg length with individual orthoses of the Orthotics medical system. Along with this, non-steroidal anti-inflammatory drugs, vitamins, physiotherapy, massage, exercise therapy and wearing rational shoes were prescribed.

RESULTS AND DISCUSSION

In the pathogenesis of knee joint OA, a significant role is assigned to a violation of biomechanics. During movement, the total vector of the reaction forces of the support normally runs along a line located medial to the knee joint. This arrangement determines the displacement of the main load line to the medial "compartment" of the joint. As a result, the compression forces on the medial side of the joint are 2.5-3 times higher than those on its lateral side, which leads to accelerated "wear" of the structures of the medial "compartment". The development of pain of overload origin in the joint It is often associated with the development of aseptic inflammation and hyperproduction of inflammatory mediators 8, such as prostaglandins and leukotrienes. The pharmacological approach to their correction consists in the use of a nonsteroidal anti-inflammatory drug with a short-term effect. When the feet are deformed, due to the weakness of the ligaments and muscles, the head of the talus bone can move downwards, which causes the heel bone to deviate outward and the posterior part of the foot to version. With excessive weight load, this displacement leads to internal rotation of the lower limb around the hip joint. Such The pathological condition is a consequence of insufficient subcutaneous support of the calcaneus due to its excessive pronation. With the version of the posterior part of the foot, for every 2 degrees, the

tibia and knee turn inward by 1 degree, this indicates the rotation of the tibia and calcaneus in the frontal plane. Such a violation of the anatomical and functional state of the feet leads to the development of a pathological condition at the level of the knee joints. From the point of view of biomechanics of movement in the human body, each overlying joint depends on the underlying and on the contrary. Since the moment of using Orthotics orthoses, patients have noted comfort when walking, correction of foot deformity, noticeable improvement in posture, gradual relief from pain in the knee joints and refuse long-term conservative treatment and surgery. All this confirms that the origin of pain in the knee joints, the inflammatory process, the suffering of patients, the lack of effect from long-term conservative treatment, are mainly associated with anatomical and functional disorders of the foot of a mechanical nature. Biomechanical correction can be achieved only with the help of individual orthoses of the foot, eliminating their mechanical disorders.

Conclusion. Based on clinical research and analysis of literature data, it has been shown that in the development of the pathological condition of the knee joint in patients, the main role is played by a violation of the anatomical and functional state of the feet. The use of orthoses of the Orthotics medical system significantly improves the biomechanics of the feet and knee joints, eliminating the vague position, relieves the medial compartment of the knee joint and helps to relieve pain, reduce the development and progression of OA of this joint. The main causal factor in the development of idiopathic knee joint OA It is an anatomical and functional disorder of the feet, the correction of which by orthoses helps to relieve pain, improve joint function, restore limb sup portability, as well as exclude additional, prolonged and ineffective treatment. The results of this study allow us to correctly understand the causal factor of the development of idiopathic knee joint OA, choose an effective treatment method, and also warn specialists against a “segmental” approach to diseases of this joint.

REFERENCES:

1. Lazurenko O.E. Rehabilitation of the future today // Healthcare of Russia. – 2019. – pp. 152-154.
2. Lukina K.A., Zaitsev D.A., Garmaeva T.Ts, Mendeleeva L.P. Telemedicine as an instrument of interregional remote interaction with specialized medical organizations of the subjects of the Russian Federation // Doctor and information technologies. – 2020. – No. 4 – pp. 68-77.
3. Ryzhkovich A.V. A brief methodological guide to the operation manual.

- Robotic mechanotherapy. The MOTO-L model / A.V. Ryzhkovich. Podolsk : [B. I.], 2023. – 32 p.
4. Akulin I.M., Chesnokova E.A., Presnyakov R.A., Pryadko A.E., Zimina E.I., Guryanova N.E. The procedure for the implementation of telemedicine consultations in the subjects of the Russian Federation // Doctor and information technology. - 2020. – No. 3. – pp. 49-59. 24
5. Ryzhkovich A.V. A brief methodological guide to the operation manual. Robotic mechanotherapy. The MOTO model / A.V. Ryzhkovich. Podolsk : [B. I.], 2023. – 38 p.