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ULTRASOUND STUDY OF PATIENTS WITH KNEE ARTHROSIS

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Annotation: The essence of this scientific article is that Osteoarthrosis is a common degenerative joint disease, early changes in the joint, the etiology of knee and hip osteoarthritis and many other information.

Key words: Osteoarthrosis, Epidemiological studies, X-ray examinations of osteoarthrosis, Etiology of knee and hip osteoarthrosis.

INTRODUCTION

Knee arthrosis is one of the most common orthopedic diseases. It is a disease of the knee joints, which leads to injury, injury and bone loss. Due to constant pain, it increases the quality of life of patients.

Causes of origin:

Genetic predisposition;

Injuries;

Physical behavior that does not correspond to a person's age, for example, running on asphalt, is harmful to elderly people, during this exercise, significant pressure is placed on the knee joint, and dystrophic changes in the ankles are damaged.

Overweight and obesity;

Arthritis - inflammation of the knee joints leads to an increase in synovial fluid and a deterioration in its quality.Metabolic diseases - for example, lack of calcium leads to dystrophic changes in bones and joints.

Flat feet - shift the center of gravity and put the wrong stress on the joints. Stress and nervous tension cause metabolic changes in the body.

Remedies:

The main tasks of treatment of arthrosis of knee joints:

Preventing the development of the degenerative process in the ankle and bone;

Stopping pain and reactive inflammation;

Improve joint function.

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Medicinal and non-medicinal methods are used in the treatment. When treated with a medicinal method, drugs aimed at stopping pain and correcting inflammation are used. Non-pharmacological treatment includes physical education, various types of physiotherapy procedures, healthy lifestyle.

MAIN PART

Treatment of knee arthrosis should be comprehensive. One of the important conditions for successful treatment is timely diagnosis and early treatment. It prolongs the period of remission, prevents ankle and bone damage and deformation of the knee joint.

It should be said that today it is impossible to completely get rid of this disease. Only the changes mentioned above can be reduced. The main focus is on drugs that restore the cartilage tissue, a process that takes a long time and requires patience from the patient, because other treatments are only partially helpful and temporary. Therefore, it is best to be treated in constant communication with a doctor. In general, this disease is secondary, that is, it appears against the background of other diseases, for example, obesity, injury, stress. Taking all of this into account, the doctor starts the treatment.

The hip joint is a ball and socket joint surrounded by ligaments, strong muscles and bursae. The joint bears weight and has high internal stability and a wide range of motion. In young people, pain in the hip region usually occurs in the muscles, tendons, or bursa, while in older people, osteoarthritis is the main cause of hip pain.

The knee is a weight-bearing joint that is important for walking, standing, bending, stooping, and squatting. The knee is quite unstable and depends on ligaments and strong muscles as shown in Figure 1. The knee has two joints, the femorotibial and the femoropatellar. There are strong ligaments on the inside and outside of the joint, and in the center of the femorotibial joint are the cruciate ligaments, which provide stability and allow normal mechanical function of the knee. The menisci are curved, fibrocartilaginous structures located between the femur (femoral condyles) and tibial bones (tibial plateau). The knee joint is strengthened and supported by muscles that originate above the hip joint and on the axis of the femur and attach to the bony structures below the knee joint. There is a synovial capsule around the knee joint, and the joint is protected by several bursae.

All of these structures are easily damaged by injury and overuse, and medical treatment of knee pain is very common. Osteoarthritis of the knee is a common disease among the elderly, causing pain and disability. In young people, patellar bursitis and patellofemoral pain syndrome, such as painful pes anserinus, are more common.

Osteoarthritis is a common degenerative joint disease in which the cartilage is more or less destroyed and the underlying bone structure is affected. Sometimes it is accompanied by several symptoms, but usually OA causes suffering, changes in work capacity and reduced quality of life. Changes in the joint can be seen on X-rays, and a person with OA usually seeks medical attention because of pain, even at rest, and decreased range of motion. In severe cases, the joint can become completely stiff and even destroyed. Surgery to replace a damaged joint with a prosthesis is well developed today.

It is difficult to study the causes of hip osteoarthritis. It is usually difficult to determine the onset of the disorder; development is usually slow and insidious (ie, you don't necessarily know it's happening). Endpoints for research purposes can range from mild changes on x-rays to symptomatic disease requiring surgery. In fact, the endpoints used to diagnose the condition may differ between different traditions in different countries and even between different clinics in the same city. These factors create problems in the interpretation of research studies.

Epidemiological studies attempt to determine the relationship between exposures such as exercise and outcomes such as osteoarthritis. When combined with other knowledge, associations can be found that can be considered causal, but the chain of cause and effect is complex. Osteoarthritis is common in every population, and it should be remembered that the disease exists in people without dangerous effects, and in the group there are healthy subjects with high and known harmful effects. Unknown pathways between exposure and disorder, unknown health factors, genetics, and selection forces may be a few contributing factors.

The occurrence of arthrosis increases with age. Radiographic studies of osteoarthritis of various joints, mainly the hip and knee, have been performed in different populations and the prevalences have been found to vary. The explanation may be ethnic differences or changes in research methods and diagnostic criteria.

Congenital and developmental diseases and changes: Early changes in the joint, such as those caused by birth defects, infections, etc., lead to early and faster development of hip osteoarthritis. Knock-knees (varus) and bandy-legs (valgus) put an uneven distribution of forces on the knee joint, which can be of some importance for the development of arthrosis.

Fear not: There are genetic factors for osteoarthritis. For example, osteoarthritis of the hip is a rare disease among Asians and more common among Caucasians, suggesting a genetic factor. Osteoarthrosis in three or more joints is called general osteoarthrosis and is hereditary. The hereditary path of osteoarthritis of the knee is not well known.

CONCLUSION

Excess weight: Excess weight can probably lead to osteoarthritis of the knee and hip. The association between excess weight and knee osteoarthritis has been shown in large epidemiological studies of the general population, such as the United States National Health and Nutrition Examination Survey (NHANES) and the Framingham Study. The association was strongest for women, but also existed for men (Anderson and Felson 1988; Felson et al. 1988).

The etiology of knee and hip osteoarthritis, as in all diseases, is complex and multifactorial. Recent good studies have shown that the physical load caused by occupational effects on the joints plays a role as a contributing factor in the development of early osteoarthritis.

Most epidemiologic studies of physical workload are cross-sectional, conducted in occupational groups without assessment of individual exposure. These serious methodological problems make it very difficult to generalize the results of such studies. Several studies have found that farmers have more hip osteoarthritis than other occupational groups. In a study of 15,000 565 farmers, farmers' wives and other farm workers in Sweden, they were asked about past X-rays in which the hip joint could be seen. Among the 151 men and 1984 women who were examined, the hip joints were examined at 1 year using the same criteria and the same investigator as in the Swedish population study.

Another English study in 1968 found that dockers had more knee osteoarthritis than civil servants in sedentary occupations (Partridge and Duthie 1968).

In Sweden, Lindberg and Montgomery examined shipyard workers and compared them with office workers and teachers (Lindberg and Montgomery 1987). Among enterprise workers, 3.9% have gonarthrosis, 1.5% among office workers and teachers.

In Finland, Wickström compared concrete reinforcement workers with painters, but found no difference in knee disability (Wickström et al. 1983). A later Finnish study compared knee disorders in carpet and floor layers and painters (Kivimäki, Riihimäki and Hänninen 1992). Knee pain, knee accidents, and treatment regimens for knees, as well as osteophytes around the patella, are more common among carpet and floor layers than artists. The authors note that kneeling increases the risk of knee disease and that changes observed on X-rays may be an early sign of knee degeneration.

In the first National Health and Nutrition Examination Survey (NHANES 1) in the United States, factors associated with osteoarthritis of the knee were examined for a total of 5,193 men and 74 women aged 35 years, of whom 315 were radiographically diagnosed. folded osteoarthritis of the knee (Anderson 1988). In their study of occupational load, the authors described the physical demands and stress on the knees resulting from occupational titles in the US Department of Labor's Dictionary of Occupational Titles. For both men and women, the risk of developing knee osteoarthritis was twice as high for those whose work involved a lot of bending of the knee compared to those who did not. When controlling for age and weight in a statistical analysis, they found that 32 percent of knee osteoarthritis in these workers was occupational.

In the Framingham Study in the United States, people from Framingham, outside Boston, were followed for more than 40 years in an epidemiological study (Felson 1990). Occupational status 1948-51 and 1958-61 and radiographic findings of knee osteoarthritis 1983-85 are reported. The work of each subject is characterized by its level of physical demand and the work related to knee flexion. This study found that the risk of developing osteoarthritis of the knee doubled for those who bent their knees a lot and had at least moderate physical demands.

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