

TREATMENT OF BONE DISEASES. PREVENTION OF OSTEOCHONDROSIS, OSTEOPOROSIS DISEASES

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Abstract:

The current study is to distinguish between osteochondrosis and osteochondritis, utilizing surface microscopy of individuals with documented pathology. Osteochondrosis is associated with smooth borders and gradient from edge to defect base, while osteochondritis and subchondral impaction fractures are associated with subsidence of the affected area of articular surface with irregular edges. The base of osteochondrosis is penetrated by multiple channels, smoothly perforate its surface, indistinguishable from unfused epiphyses, confirming their vascular nature.

Keywords: Subchondral impaction fractures, Bone modification, Vascular supply, Epiphyses, Epiluminescence microscopy, osteoporosis diseases.

It is known that the skeleton supports the whole body. Without the skeletal system, we will not only be able to perform various movements, but even stand up. Therefore, supporting the function of the skeleton is one of the most important skills necessary for life. Unfortunately, bone disease is common. Most often, they are associated with the bottom of the joints. In many cases, problems with the musculoskeletal system began to appear in old age. Very often they develop in menopausal women. However, bone diseases are found in people of all ages. No, the exception is children and babies. Osteochondrosis (Greek: osteo - bone and chondros - cartilage) is a disease caused by degenerative trophic and functional changes of the ankle joint connecting the vertebrae. Usually, the cervical or lumbar parts of the spine are affected. Metabolism disorders, various injuries, heavy stress and other reasons can be. The activity of the spine is functionally dependent not only on the connective ligaments, but also on the supporting muscles of the body and spine, blood and nerve vessels, and the membranes of the spinal cord. Intervertebral discs ensure flexibility, elasticity, mobility of the spine, resistance to physical stress. The ligaments and tendons covering this disc hold the vertebrae together and form a single vertebral column. Rheumatism, trauma, immunosuppression, and genetic factors can cause changes in the disc and its surrounding ligamentous elements. Osteochondrosis is more common in neck and lumbar discs. The degenerative changes observed in the disc are based on complex biochemical processes. Under the influence of various injuries, the main substance of the disc undergoes depolymerization, which injures and changes the cells. As a result, the main substance causes an increase in sour mucopolysaccharides, which gradually softens the tendon and tendon tissues of the disc, creates cracks in the fibrous rings and breaks the hermetic condition of the disc, dystrophic and degenerative processes develop. Osteoporosis is a metabolic disease of bone tissue, and is a systemic progressive disease of the skeleton characterized by a breakdown of bone microarchitecture and a decrease in their density, which leads to bone fragility.

Osteoporosis: causes and factors of development. The reason for the development of the disease can be the long-term effects of smoking, excessive alcohol consumption, metabolic diseases, gastrointestinal diseases and other factors. Osteoporosis in the elderly develops due to poor digestion of calcium and some nutrients. The most common cause of osteoporosis is hormonal deficiency. Osteoporosis in women is usually noted during menopause. In this case, the disease develops not due to a lack of calcium in the body (calcium is sufficient), but due to a violation of the activity of bone-forming cells. These events occur due to hormonal imbalance, so in such cases, women should consult a gynecologist and, if necessary, receive hormonal therapy. Brittleness of bones with age is a natural physiological phenomenon. However, in some people, these processes occur at a rapid pace. This can be caused by some factors. Age-related (senile) osteoporosis develops due to calcium deficiency - when the rate of bone breakdown exceeds the rate of new bone formation. This form of osteoporosis usually affects people over 70 years of age. According to statistics, senile osteoporosis occurs almost twice as often in women, and in more than 95% of cases it is associated with the climactic period. Less than 5 percent of osteoporosis is due to other diseases or the use of certain drugs. This is a form of secondary osteoporosis that develops as a result of diseases of the kidneys, endocrine glands, and other diseases that lead to structural and functional diseases of bone tissue. An idiopathic form of osteoporosis is also distinguished (mainly in young people). This is a very rare disease, the cause of which is currently unknown. Idiopathic osteoporosis can develop in babies, children and young people with normal hormones. In addition, such people do not have diseases that lead to the development of osteoporosis.

Osteochondrosis passes through 2 stages: 1) Period of chondrosis. In this case, changes in the connective fibrous ring and other elements surrounding the core of the intervertebral disc begin, but since the disc does not feel pain, the patient does not have clinical symptoms during this period; 2) Period of osteochondrosis. Degenerative changes that begin in this case move to the bone part of the disc and spine, the limited "covering" plates are torn and their tightness is lost; blood vessels and nerve fibers pass into the disc and cause pain. The dystrophic process develops in the vertebral joints around the disc, in the short-long ligaments and narrows the intervertebral space, the spine remains "sat". Symptoms of the disease depend on the location of the degenerative disc. If it is in the neck area, there are changes, diseases and syndromes in the activities of the organs related to this area. Neck osteochondrosis has extracranial (external nerve root syndromes), intracranial (internal and external injuries, blood deficiency), vertebral (vertebral deficiency) types. Symptoms of osteochondrosis in the chest are mainly expressed by nerve root syndromes. Osteochondrosis of the lumbar spine is more common, because a person requires a certain physical strength when doing any work, and this in itself strains the back. The following types of lumbar osteochondrosis are distinguished: 1) root - reflex syndrome (lumbago, sciatica, etc.); 2) spinal disc herniation, in which various compression myelopathies are observed; 3) syndromes observed together with root blood vessels and joints around the disk; 4) syndromes (sacroilitis, sacralization, coccygodynia) occurring together with ligaments of pelvic bones and coccyx.

Summary: Pathology can be congenital (genetically primed) and acquired during their lifetime. Diseases are divided into localized, affecting the entire musculoskeletal system, and general (involving one or more bones). Inflammatory pathology can be genetic (congenital anomaly), swelling can be a symptom. It also defeats the systemic pathology of the musculoskeletal system of the body, including cracks, joints, deformities and contractures. Diseases of human bones have this distribution in the world. Most often they are found among the female population. Nevertheless, the percentage of men with diseases of the musculoskeletal system is also large.

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