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## **COMPLICATIONS AND RISKS OF CLINICAL BENIGN BONY GROWTH: EXOSTOSIS**

Exostosis, also called osteoma, is a benign growth of bone extending outwards from the surface of a bone. It can occur in any bone and be triggered by a number of factors. When the exostosis is covered with cartilage, it's called an osteochondroma [2, p. 340]. Exostosis can be painless, or it can cause severe pain and require surgical removal. It frequently appears in childhood.

The exact cause of exostosis is not yet understood. There are a number of examples of exostoses that occur due to local irritant stimuli. Moreover, there are different reasons of exostosis: injuries and blows, inflammation of the mucous membrane of the inner part of the joint, osteomyelitis, fibrosis, bursitis, limitation of the periosteum, chronic inflammation in the bones, aseptic necrosis bones, disorders of the endocrine glands, disconnections, chronic joint diseases, syphilis, anomalies of the skeletal system, chondromatosis. Indeed osteochondromas have also been previously documented to cause vascular injuries and symptoms, including popliteal artery compression and rupture as well as acute lower limb ischaemia. In several generations of one family, bone exostosis is almost always detected [3]. And most often the pathology is diagnosed in children aged 8 to 18 years.

The symptoms of this disease can be very different. The disease often does not manifest itself and is detected only by chance during radiography, which is done for a completely different reason. Sometimes the reason for detection is the large size of the tumor, when it can be easily felt or even seen.

In some cases, large exostoses can cause pain or active discomfort, as well as affect the restriction of movement. Watch out for people who may turn into a criminal tumor. This happens when the exostosis appears in the past pressure and is also in the area of inflammation. This most often happens when the tumor is in the area of the heel bone. Also, the bones that are prone to the development of such growths should include the femur, tibia, ribs, forearms, vertebrae and shoulders. On the fingertips growths are very rare. Here they grow under the nails. This type often causes pain and also leads to detachment of the nail plate.

In other parts of the body, marginal exostoses do not cause pain. However, if this happens, you should think that the tumor began to regenerate into cancer, that is, the process of malignancy began. In addition, osteochondroma can begin to grow inside the joint (around a knee-cup). Without a quick and accurate diagnosis, as well as without the removal of exostoses, this can lead to significant deformation of the knee, which will eventually cause disability. As the vertebrae grow, changes such as nerve root compression or even spinal cord injury can also occur [1, p. 171]. Keep in mind that the size of the osteochondroma in the picture may differ significantly from the real thing, as its outer surface is covered with cartilage.

MRI can also be used in the diagnosis, but this method has some contraindications that you must know.

Treatment of exostoses is possible only surgically. No conservative treatment or folk methods to get rid of this disease will not help. If the disease was detected before the age of 20 and does not interfere with a normal lifestyle, and does not give any symptoms, the operation is not performed. The patient takes an X-ray of this area every year and is observed by an orthopedist.

### **REFERENCES**

1. Michael W. Ross, Sue J. Dyson. Elsevier Health Sciences, 2010. – p.171.
2. Molnar, R. E. Theropod paleopathology: a literature survey: In: Mesozoic Vertebrate Life, edited by Tanke, D. H., and Carpenter, K., Indiana University Press, 2001. – p. 337-363.
3. Soliman, R. "Current paediatric orthopaedic practice in hereditary multiple osteochondromas of the forearm: a systematic review", 2018