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THE PECULIARITIES OF DIFFERENTIAL DIAGNOSTICS OF TRANSIENT SYNOVITES IN CHILDREN

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The relevance of this research has been stipulated by the fact that transient synovitis is rather common in the form of a short-termnon-specific inflammation of the synovial membrane of the hip joint (less often of the knee joint) in children, especially boys. The development of this process is frequently associated either with a minor injury or any disease with a low sub-febrile fever, such as bacterial diseases of the respiratory tract and oral cavity (tonsillitis, pharyngitis) during long walks. Transient synovitis of the joints in children occurs quite often, however the pathogenesis of this disease has not been sufficiently investigated. Basically, synovitis progresses in children from one and a half years old and up to their puberty.

The purpose of this paper was to determine the major difference in diagnostic criteria, typical of transient synovitis, on the basis of considering 267 cases of the disease. From 2018 to 2020, 195 children, diagnosed coxitis (105 boys and 90 girls) were treated in the Department of Pediatric Traumatology of the Emergency Hospital of Chernivtsi. Their average age was 5,0±2,7 years old. Four clinical groups have been distinguished in the course of the treatment. The first group comprised the patients with no significant changes in laboratory and instrumental parameters after the examination. Therefore, they were diagnosed transient synovitis. The second clinical group contained 12 children with juvenile rheumatoid arthritis. The third group was made up of 10 children with Legg-Calvé-Perthes disease (LCPD). The fourth group consisted of 47 patients with juvenile epiphyseolysis, hematogenous osteomyelitis and tumors.

Most observations indicate that transient synovitis is usually marked with an acute onset and rapid development. It is accompanied with pain in the morning, as well as restricts both active and passive movements in the joint, which is very similar to the symptoms of juvenile rheumatoid arthritis.

The child finds it difficult to perform any movements in the joint. What is more, he/she tries to fix the leg in a gentle position. The limb is in a position of flexion, reduction and internal rotation, while the child resists to any attempts of passive movements due to muscle spasms. This process is mostly of a unilateral nature, though occasionally it might be bilateral.

These children almost always limp and suffer from paining the joint on palpation. The temperature is usually normal or slightly elevated, but rarely high. As a rule, the duration of the disease is 10-14 days.

Nevertheless, since the pathogenesis of this disease has not been sufficiently investigated, it is necessary to conduct thorough diagnostics before prescribing the treatment. Differentiation helps to detect in the anamnesis a prior illness with a sub-febrile fever. When analyzing the data of laboratory tests, it is essential to point out the almost complete absence of changes in both general and biochemical blood tests. The acute phase indicators, like C-reactive protein, antistreptolysin-O, sialic acids and others, also remain intact. This eliminates the danger of a great number of inflammatory and destructive diseases of the joints.

Radiography allows visualizing the expansion of a joint crack, whereas the ultrasound research of joints shows the increase in the amount of synovial liquid. In case the diagnosis might seem doubtful, it is advisable to perform the puncture of the joint, the microbiological culture of synovial fluid, as well as magnetic resonance imaging of the affected joints.

Thus, the differential approach to diagnosing and treating children with coxitis enabled to identify clinical groups with specified diagnoses, on which further treatment tactics depended.