**Introduction**

Reactive arthritis is an important problem in pediatrics, which is associated with its highest weight (41-56%) in the structure of the joint pathology in children. Reactive arthritis is defined as an inflammatory involvement of joints that arises following an infection, although the pathogens cannot be cultured from the affected joints.

The importance of the problem is also caused by the possibility of chronicity of inflammatory process and transformation in juvenile rheumatoid arthritis and osteoarthritis.

Timely diagnosis has a big role in course and outcomes of reactive arthritis. An important role in diagnosis of reactive arthritis takes laboratory and instrumental examination. X-Ray is traditionally used as a visualization method in rheumatology. However, this method can’t assess a condition of joints’ soft tissues and determine expression of inflammatory changes. Ultrasonography of joints is an instrumental method of visualization that amplify the diagnostic capabilities of assessing changes in joints.

**Materials and methods**

30 children at the age 2 to 16 years with reactive arthritis were observed. To all patients were performed clinical and laboratory investigation, radiological examination of joints. All patients were underwent ultrasonography of joints (Ultrasonic device Radmir Ultima PA).

**Results**

The average age of examined children was 10,3 ± 4,8 years. Reactive arthritis incidence in different age groups was different. 14 (46,7 ± 9,3%) children with reactive arthritis were children of elder school age. For children of preschool and younger school age incidence of the disease was similar - 7 (23,3 ± 7,8%) and 8 (26,7 ± 8,2%) cases, respectively, while only 1 (3,3%) case of reactive arthritis was registered in the baby under 3 years.
Acute course of reactive arthritis was registered in 18 (60,0 ± 9,1%) children, 12 (40,0 ± 9,1%) children suffered from prolonged or relapsing course of reactive arthritis.

Among triggers of disease were acute respiratory infection (33,3 ± 8,7%), vulvovaginitis (3,3±3,3%) and injury (10,0 ± 5,6%). However, 16 (53,3 ± 9,3%) children have had any triggers in anamnesis.

Among the complaints were pain in joints, its swelling, gait disturbance, fever, transient morning stiffness lasting up to 1 hour. 17 (56,7 ± 9,2%) children have had monoarthritis, 12 (40,0 ± 9,1%) - oligoarthritis, 1 (3,3 ± 3,3%) - polyarthritis. The average number of affected joints (Me) was one joint. Asymmetric involvement of joints of the lower extremities prevailed. Knee was affected in 18 (60,0 ± 9,1%) children, coxal joint - in 14 (46,7 ± 9,3%) patients, ankle - in 3 (10,0 ± 5,6%). A single was involvement in the inflammatory process of the shoulder joint and small joints of a feet.

Increased level of antistreptolisin-O have been reported in 3 (10,0 ± 5,6%) patients.

Examination of smears from a pharynx in 3 (10,0 ± 5,6%) children revealed the presence of Haemolytic Streptococcus, in 8 (26,7 ± 8,2%) - of Staphylococcus Aureus, and single cases of detection Enterococci, Kl. Oxytoca, S. Pseudodiphtericum, S. viridans, N. flava.

The changes on radiographs were registered only in 10 (33,3 ± 8,7%) patients in the form of increasing of volume and compaction of periarticular soft tissues, at 2 (6,7 ± 4,6%) of children recorded expansion of joint space of the affected joint.

Sensitivity X-rays as a method of diagnosis of reactive arthritis in children amounted to 40,0%. Ultrasound joints registered pathological changes in 100% of cases. Ultrasonography of joints recorded changes in the joints such as synovitis, thickening of the synovial membrane, expansion joint gaps, tendonitis, bursitis.
Conclusion
Thus, X-Ray imaging method is not sensitive enough, carries radiation and can’t be reused by monitoring of disease course. Ultrasound imaging technique becomes an important method of diagnosis of reactive arthritis in children which can visualize inflammatory changes in the joints and has 100% sensitivity. Ultrasound examination is a non-invasive, available method, which hasn’t any contraindications. This imaging technique is significantly (p<0.05) more sensitive identification method of reactive arthritis in children, compared to the X-ray of joints.