

Assessment of Activity of The Juvenile Idiopathic Arthritis by Magnetic Resonance Tomography of the Knee

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Abstract

For the purpose of development of the standardized criteria of an assessment of activity of inflammatory process in knee joints juvenile idiopathic arthritis (JIA) patients were studied 54 JIA patients with clinical knee involvement using MRI. The revealed changes, such as a thickening of a synovial hipertrophy, intra-articular effusion, bone marrow edema, bone erosion and cartilage lesions, were presented in the form of scoring system depending on expressiveness of each sign. A statistically significant ($p < 0,02$) correlation ($r = 0,6$) between the scores, characterized by thickening of the synovial membrane, with the degree of activity of JIA. Reliable statistically significant correlation between the thickness of intra-articular effusion, bone marrow changes, bone erosions and cartilage lesions measured quantitatively and in points, with the degree of activity of JIA is not set, which is consistent with the data of foreign authors. Thus, MRI, together with the establishment of joint damage morphological substrate can be used to assess the activity of juvenile idiopathic arthritis (JIA). Feasibility of introducing a scoring system standardization changes using MRI in pediatric populations in patients with JIA, including for the knee joint. Results using scoring morphological changes in the knee joint in JIA indicate the need for further study of changes such as swelling bone marrow, bone erosion, cartilage lesion to assess disease activity.

Key words: Juvenile Idiopathic Arthritis, Magnetic Resonance Imaging, the Activity of the Inflammatory Process, Knee Joint, Scoring.

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