CXCL1, BUT NOT AUTO-ANTIBODIES OR CD4+CCR6+ SERUM leptin and adiponectin levels in ASSESSMENT OF MORPHOLOGY OF THE EARLY AND LATE STAGE OF JUVENILE RHEUMATOID ARTHRITIS

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Background: One of the current problems of modern rheumatology is chronic inflammatory diseases of the knee joint in children. With juvenile rheumatoid arthritis (JRA), an uncontrolled inflammatory process can lead to the formation of contractures and deformities of the limbs. Our aim is to study morphology of the early and late stage of juvenile rheumatoid arthritis

Methods: In total, 81 knee joint surgery was performed on 71 children of the children's age in connexion with the JRA. The average age of the patients was 11 years (6–14). To verify the diagnosis during diagnostic arthroscopy, a multifocal biopsy was performed on 7 points. Pathomorphological study of the material was performed according to the conventional histological method of studying soft tissues

Results: The results of the pathomorphological examination were analysed for the time frame of the appearance of the JRA. Pathomorphological early and late synovitis criteria were found. Early criteria (typical for the first three months after the JRA debut) – the phenomenon of necrosis in synoviocytes and the subintimal layer, palisade-like cell structures in the sub-synovial layer, synoviocyte proliferation, fibroind superimpositions on the surface of the cover layer, productive endo-vascular erythoendotheliosis, lymphocyte infiltration and plasmocytes. Late criteria (duration of the disease – more than 3–6 months): marked plasmacytic infiltration with the formation of lymphoid nodules with a hermetic centre, activation of fibron and sclerotic processes with the formation of extensive fibroint necrosis with perilocal sclerosis, the formation of rheumatoid nodules, productive synovial hyperplasia, deposition of amyloid masses, formation of pannus granulation tissue with destructively invasive growth articular cartilage and synovium

Conclusions: Determining the stage of JRA is of great clinical importance for the early initiation of treatment and prevention of irreversible destructive complications. The proposed new method for determining the prevalence of pathological changes in the synovial membrane of the knee joint in children with JRA using a combined arthroscope and pathomorphological evaluation of pathological changes in synovium in 7 joints allows to accurately determine the prevalence of the pathological process in the synovium, which has macroscopically only local manifestations

REFERENCES:

Disclosure of Interest: None declared

RESULTS:
Antibodies against mIG of the IgG2a isotype differed prior to clinically manifest disease but are not suitable as a differentiation marker. CD4+CCR6+ memory Th cells in blood differed only at day 35. The same holds for IL-6, TNFα and CXCL2. In contrast, CXCL1 differed prior to clinically manifest disease with an AUC significantly better (p=0.003) than random.

Conclusions: Here we identified CXCL1 as a marker that can differentiate mice prior to clinically manifest disease into CIA positive and CIA negative mice. This might help facilitate research into early disease processes and preventive pre-clinical treatment strategies.

Disclosure of Interest: None declared