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Aktywność egzoglikozydaz lizosomalnych w ślinie
dzieci i młodzieży z młodzieńczym idiopatycznym zapaleniem stawów

STRESZCZENIE

JIA is a systemic disease of unknown etiology, the essence of which is a chronic inflammation of the immune, damaged articular cartilage and bone and root responsible for the symptoms of extra-articular and systemic complications. JIA attacks usually large joints such as .: knee, wrist, but they can also be the joints of the spine and the mandible. There are several subtypes of JIA, among others, generalized (systemic) form, oligoarticular form, polyarticular form, and in this form are seronegative (RF-) and seropositive (RF +) forms.

Due to the possibility of permanent damage to the joint structures as a result of chronic inflammation of JIA can be a cause of disability among children and young people who sometimes also occurs in adulthood.

Exoglycosidases lysosomal are enzymes hydrolyze glycoconjugates (glycoproteins, glycolipids and proteoglycans) the degradation of tissues. They act on the outer part of the chain cleavage of a monosaccharide of oligosaccharide of glycoconjugate. Exoglycosidases presence has been demonstrated in a number of tissues and body fluids.

The aim of this study was to evaluate the activity of lysosomal exoglycosidases in the saliva children and young people with juvenile idiopathic arthritis, which allowed to answer questions: 1. Dose JIA affects (and to what extent) on the metabolism of glycoconjugates in the oral cavity? 2. Does JIA changes lysosomal exoglycosidases activity in the saliva of children and young people with JIA in comparison to healthy children? 3. What is the possibility of signs of lysosomal exoglycosidases saliva in the diagnosis of JIA?

The study group consisted of 31 children and young people, aged 6-20 years, patients with JIA under the care Outpatient Clinic of Pediatric and Developmental Disorders Children and Young People UMB and 31 healthy children and young people.

The study was approved by the Bioethics Committee of the Medical University of Białystok nr: R-I-002/164/2015.

The exoglycosidases activity of lysosomal N-acetyl- β -D-glucosaminidase and its isoenzymes A and B, β -galactosidase, α -fucosidase, α -mannosidase and β -glucuronidase was determined in the mixed saliva as the test material.

Conclusions:

JIA influences on the activity of salivary lysosomal exoglycosidases, thus affecting on the glycoconjugates metabolism in the oral cavity.

The highest statistically significant changes relate to the activity of salivary exoglycosidases lysosomal patients with aggressive polyarticular JIA in comparison to healthy children.

Aggressive polyarticular form of JIA causes higher changes in the activity of the enzymes than non-aggressive form of polyarticular and oligoarticular form.

With the exclusion of other oral diseases and systemic running with elevations of exoglycosidases we can propose the use of determination of these enzymes in the saliva in the diagnosis of an aggressive form of polyarticular JIA.