PEDIATRIC RHEUMATOLOGY

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Association of the polymorphisms *P53* gene with juvenile idiopathic arthritis in children Russian Fedration

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Background

Juvenile idiopathic arthritis – is a chronic systemic autoimmune disease that is a characterized by articular lesion with synovial hyperplasia and cellular infiltration. *Arg72Pro* (4ex) and *ins/del*16bp (3in) polymorphisms are associated with affects the functional activity of the p53 protein. (P.Dumont et al, 2003)

Aim

The purpose of our study is estimate course and outcomes of juvenile idiopathic arthritis of the children with various genotypes of *p53*.

Methods

We examined 58 children with juvenile idiopathic arthritis. Clinical, serological and x-ray manifestations were analyzed in children and correlated with the genotypes. For detection erosion bone process we used ultrasound, x-ray, MRI and diagnostic arthroscopy with synovial biopsy. We investigated (PCR-RFLP) the status of *p53 gene* this children with juvenile idiopathic arthritis and 100 healthy children living in Russian Federation.

Results

Genotypes distributions of *Arg72Pro* and *ins/del*16bp polymorphisms did not differ significantly (p>0,05) between JIA patients and controls. Children with mild form oligo-, polyarthritis JIA achieved remission had significantly higher percentage genotype *Arg/Arg+del/del* compared children with severe oligo, polyarthritis duration more 5 years (89,7 vs 23,8%, p<0,01). Young girls with severe oligoarthirits, ANA-positive and erosion joint process had a significantly higher percentage of genotype *Arg/Pro+ins/del* compared children with mild form oligoarthritis, ANA-negative (87,5 vs 9%, p<0,01). Girls with severe polyarthritis DAS44 4.0±1.1 had significant high percentage genotype *Arg/Pro+ins/del* compared children with mild form polyarthritis DAS44 2.4±0.9 (67 vs 9%, p<0,01).

Conclusion

Girls with genotype *Arg/Pro+ins/delp53* had more severe and aggressive form oligo-polyarthritis manifested by erosion process.

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