

Association of Toll-Like Cell Receptors TLR2 (p.Arg753GLN) and TLR4 (p.Asp299GLY) Polymorphisms with Indicators of General and Local Immunity in Patients with Atopic Dermatitis

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Abstract

© 2017 Yury A. Tyurin et al. A whole group of polymorphisms of genes involved in the formation of the epidermal barrier, immune responses, and their regulation is important in the formation of atopic phenotype. The purpose of the study is to determine the relationship of polymorphisms of genes of Toll-like receptors TLR2 and TLR4 with clinical and immunological parameters in atopic dermatitis patients in a "case-control" study. Polymorphisms of genes TLR2 (p.Arg753Gln) and TLR4 (Asp299Gly) were detected by PCR. Parameters of the state of innate and adaptive immunity were assessed by the level of local production of sIgA, cytokine profile of blood serum for IL-4, IL-10, and IFN- γ . Biological samples from 50 people with allergic pathology, aged 4.5 to 35 years, and 100 healthy individuals (controls) were analyzed. Observed dysregulation of cytokine production (IL-4, IL-10) in patients with heterozygous polymorphic genotypes probably reflects an imbalance of Th1/Th2/Th17 regulation of immune system response in these individuals.

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