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IL-1, IL-10 and TNFα genetic variants in patients with systemic lupus erythematosus

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In systemic lupus erythematosus (SLE), the immune responses, immune homeostasis and self-tolerance is actively regulated by several types of cells as well as cytokines. The aim of our study was to explore whether *IL-1, IL-10 and TNFα* genetic variants may be associated with SLE. We examined 216 patients with SLE and 552 unrelated healthy controls. The polymorphisms were evaluated by RT-PCR. The *IL-1β* rs16944 T allele as well as rs1143634 T allele were significantly frequent in SLE patients than controls (p=0.003 and p=0.017, respectively). The *IL-10* rs180872 A allele was more frequent in SLE patients (p=0.003), furthermore, the *IL-10* rs1800896 G allele was more frequent in controls (p=0.03). The *TNF-α* rs1800629 A allele was more frequent in SLE patients than in controls (p=0.002). No association was found between of the *TNF-α* rs361525 and rs1800610 and SLE susceptibility. The genotype-phenotype analysis showed association between the *IL-1β* rs1143634 and mean value of C3 (p=0.006); the *IL-10* rs180872 and AST (p=0.07); the *IL-10* rs1800896 and mean value of C4 (p=0.04); TNF-α rs361525 and SLICC (p=0.02); the *TNF-α* rs1800610 and Pt (p=0.003) and INR (p=0.004). Our study demonstrated that *IL-1β* and *IL-10* genetic variants are associated with SLE susceptibility in Polish population.

Biography

Anna Wajda, PhD is an assistant professor at the Molecular Biology Department, National Institute of Geriatrics, Rheumatology and Rehabilitation in Warsaw, Poland. She has received her PhD in the field of medical biology from Pomeranian Medical University in Szczecin, Poland. Over the past few years, she has done research in Toxicology, Medical Technology and Clinical Pharmacology.Dr. Wajda currently focuses on genetic factors in the function of the immune system and autoimmune diseases.

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