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TGF-β and IL-6 gene SNPs and their serum levels in Polish patients with SLE

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Because systemic lupus erythematosus (SLE) is a disease with a strong genetic component and the cytokine production was found to be under genetic control, we decided to explore whether polymorphisms located in the *TGF-β* and *IL-6* genes may be associated with SLE. 216 SLE patients and 552 controls were examined for *TGF-β* rs1800469 and rs1800470 as well as *IL-6* rs2069827 and rs1800795. An increased frequency of the *TGF-β* rs1800469 TT genotype and T allele was found in SLE patients (p=0.02). The TGF-β rs1800470 C allele was more frequent in SLE patients than in controls (45% vs. 40%). We found no association between of the IL-6 rs1800795 and rs2069827 and SLE susceptibility. The genotype-phenotype analysis showed association between the TGF-β 869 T/C and mean value of APTT and INR (p=0.01 and p=0.05, respectively); TGF β -509 C/T and mean value of CRP, ESR, hemoglobin, APTT Pt and INR (p=0.05, p=0.03, p<0.001, p=0.03, p=0.03 and p=0.05, respectively) as well as anti-SSA and anti-Sm presence (p=0.04 and p=0.03, respectively); the IL-6 -174 G/C and SLICC (p=0.05), anti-SSA (p=0.05) and anti-SSB (p=0.05). A higher TGF-β and IL-6 serum level was found in SLE patients compared to controls (both p<0.0001). In SLE patients with the TGF-β-509 TT genotype the TGF-β serum levels were higher than in SLE patients with TGF-β-509 CC and TGF-β -509 CT genotypes. Our results suggested that the TGF β -509 C/T variant may be considered as a genetic marker for SLE in the Polish population.

Biography

A Paradowska-Gorycka has completed her PhD from Centre of Biostructure Medical University of Warsaw. From 2016 she is the Head of the Department of Molecular Biology, National Institute of Geriatrics, Rheumatology and Rehabilitation, Warsaw, Poland. She has participated in numerous scientific conferences and is the author of over 50 scientific papers.

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