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Tumor necrosis factor alpha promoter polymorphism -308 G/A in Egyptian patients with systemic lupus erythematosus

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Systemic lupus erythematosus (SLE) is an autoimmune disease characterized by the production of antibodies to components of the cell nucleus in association with a diverse array of clinical manifestations. Polymorphisms in cytokines genes may play an important role in the development and clinical manifestation. Due to this, there is a great interest in the identification of biomarkers that which could quantify the susceptibility and disease activity. A case-control study of 100 lupus cases and 100 lupus-free adult controls was performed to analyze whether or not the polymorphism of the TNF-α gene promoter at positions -308 G/A would alter the risk for SLE and clinical manifestations. Genotyping was carried out by polymerase chain reaction, PCR products were digested by NcoI restriction enzyme and fractionated after on 2% Agarose gel and visualized posteriorly staining by ethidium bromide. There were significant differences in the distribution of the TNF-α gene polymorphism between the SLE and control groups. Individual carriers of the variant allele A had a 3.29 (95% CI: 1.7738-6.1325) -fold increased risk for SLE. Moreover, association was observed between SLE patients and serositis (P=0.0228). This study presents a preliminary evidence of association between TNF-α polymorphism and SLE susceptibility in Egyptians.

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