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Tumor necrosis factor-α gene polymorphisms at site 308 substitution as predisposing factor for acne vulgaris in Iraqi patients

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Abstract

Tumor necrosis factor-α (TNF-α) is a pro-inflammatory mediator occasionally implicated in Acne vulagaris pathogenesis. The gene encodes this factor shows high polymorphism especially in the promoter region. Total of 100 Iraqi patients with Acne vulgaris compared with 50 healthy individuals have screened for TNF-α polymorphism at position-308 using PCR-RFLP technique, the conventional PCR products have restricted by *NCO* I restriction enzyme. This study was conducted during the period Dec. 2011-Feb. 2012. The homozygous G/G genotype, the heterozygous G/A genotype, and the mutant A/A have detected in frequencies; 29%, 67%, and 4%, respectively, in the patients group compared with 58%, 30%, and 12%, respectively in control group. In addition, the significant higher expression of G/A genotype in patients group has conferred etio-pathogenecity ($p \leq 0.001$, OR=4.74, and Etiologic Fraction=0.529). Whereas, the G/G genotype had rather conferred a preventive role as it has decreased significantly in patients group (OR=0.30, Protective Fraction=0.408). In association with the gender, severity of the disease and other possible predisposing factors, we may conclude that TNF-α-308 G/A genotype may contribute to the predisposition of Acne vulgaris, there was significant association between minor A allele and the severity of the disease in the female.

Biography

Bs.C in 1987, Ms.C 1996, Iraq, Baghdad university/ college of science/ Microbiology, Ph.D in 2006, Baghdad university/ college of medicine/ medical microbiology/Immunology. More than thirteen published paper, supervising more than thirteen MsC and PhD student in medical microbiology. Member of department of medical microbiology/college of medicine/Al-Qadisya university, Iowa state university fellow. Interested the immunology of major auto-immune disease, IBD.