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Interferon –γ Gene Polymorphism as a Biochemical Marker for Atopic dermatitis in Saudis

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Abstract:

Atopic dermatitis (AD), also known as atopic eczema, is a chronic inflammatory skin disease characterized by severe itching and recurrent, relapsing eczema-like skin lesions, affecting up to 15% of children in industrialized countries. AD is a complex multifactorial disease, and its exact etiology and pathogenesis have not been fully elucidated. The aim of this study was to investigate the impact of gene polymorphisms of T helper cell subtype Th1 cytokine, interferon-gamma (IFN-γ) on AD susceptibility in a Saudi cohort. Hundred four unrelated patients with AD and 195 healthy controls were genotyped for IFN-γ (874A/T) polymorphism. Genomic DNA was separated from the fringe blood of AD patients and controls utilizing the QIAampR DNA little unit. IFN-γ quality was enhanced utilizing intensification headstrong transformation frameworks (ARMS)- PCR philosophy to identify polymorphisms at position 874 of IFN-γ. The frequency of genotype AT of IFN-γ (874A/T) was significantly higher while genotype AA was lower in AD patients as compared to controls (P <0.001). The frequency of T containing genotypes (AT+TT) was also higher in AD patients as compared to that in controls (P = 0.001). The frequencies of allele T and A were statistically different in patients and controls (P = 0.04). These results indicated that genotype AT of IFN-γ (874A/T) polymorphism is associated with AD risk and genotype AA is protective to AD. It is concluded that IFN-γ (874A/T) polymorphism is associated with the susceptibility of AD, however further studies with a large sample size involving different ethnic populations should be conducted to strengthen these results.

Biography:

Huraib GB has completed his Ph.D. in Dermatological and Venereal Diseases from Fribourg University, Germany. Earlier he did MBBS from Faculty of Medicine / King Saud University, Riyadh. He is the Deputy Director of Medical Services Department (MSD) for armed forces, Saudi Arabia. He has published several papers on the genetic basis of dermatological diseases.

Speaker Publications:

1. "The Protein Tyrosine Phosphatase Non-Receptor Type 22 (PTPN22) Gene Polymorphism and Susceptibility to Autoimmune Diseases"; Feb 2020

2. "Association of Functional Polymorphism in Protein Tyrosine Phosphatase Nonreceptor 22 (PTPN22) Gene with Vitiligo"; Jan 2020

3. "Cytokine Gene Polymorphisms in Saudi Patients With Atopic Dermatitis: A Case-Control Study"; Jun 2018
4. "The Protein Tyrosine Phosphatase Nonreceptor 22 (PTPN22) R620W Functional Polymorphism in Psoriasis"; Jan 2018
5. "Apolipoprotein EGene Polymorphisms in Saudi Patients with Systemic Lupus Erythematosus"; May 2016

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