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The *PTPN22* R620W functional polymorphism in psoriasis: A case control study**Ghaleb Bin Horaib, Fahad Al Harthi, Misbahul Arfin and Abdulrahman Al-Asmari**
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Psoriasis is a complex autoimmune disease caused by an interaction of genetic and environmental factors. *PTPN22* gene variants have been reported to influence psoriasis risk. However, data is limited to a few ethnicities and no similar study has been performed in Middle Eastern populations. The aim was to investigate the possible association of *PTPN22* C1858T (R620W) polymorphism with psoriasis in a Saudi cohort. Saudi subjects (n=306) including psoriasis patients (n=106) and healthy controls (n=200) were genotyped for *PTPN22* gene using tetra primer ARMS-PCR method. The frequencies of alleles and genotypes of *PTPN22* (C1858T) polymorphism were compared between patients and controls. The frequency of CC genotype of *PTPN22* C1858T polymorphism was significantly lower while the frequency of CT genotype was higher in patients as compared to controls [$P < 0.0001$, relative risk (RR)=7.151]. The homozygous genotype TT was absent in both the patients and healthy controls. The frequency of allele T encoding tryptophan (W) was found to be significantly increased ($P < 0.0001$, RR=5.76) while that of allele C encoding arginine (R) decreased in psoriasis patients as compared to controls ($P < 0.0001$, RR=0.173) indicating that individuals containing allele T are susceptible to psoriasis. It is concluded that *PTPN22* C1858T polymorphism is positively associated with susceptibility of psoriasis in Saudis with a relative risk of >7 and can be developed as biomarker for evaluating psoriasis risk. However, further analysis of the *PTPN22* polymorphism in larger samples from different geographical areas and ethnicity is warranted.

Biography

Ghaleb Bin Horaib has completed his MBBS from King Saud University of Riyadh, Saudi Arabia and has completed his PhD in Dermatological and Venereal Diseases from Fribourge University, Germany. He is the Deputy Director General of Medical Services in the Armed Forces, Ministry of Defense, Riyadh, Saudi Arabia. He has published 10 papers in reputed journals. He is associated with several ongoing projects on genetic basis of dermatological diseases in Saudis.

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