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POSTERS

Abdulrahman Al-Asmari, Res Clin Dermatol 2019, Volume 2

GENETIC STUDIES ON PSORIASIS: ROLE OF *METHYLENETETRAHYDROFOLATE REDUCTASE* (*MTHFR*) C677T GENE POLYMORPHISM

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Psoriasis is a chronic, immune-mediated inflammatory skin disease affecting approximately 120-180 million people worldwide. The pathogenesis of psoriasis is very complex and several different etiological hypotheses including those of the genetic, environmental and immunological factors have been suggested to explain its pathogenesis. *Methylenetetrahydrofolate reductase* (*MTHFR*) has been linked with the etiopathogenesis of psoriasis with inconsistent results. The aim of this study was to determine if the *MTHFR* (C677T) polymorphism confers susceptibility to psoriasis in Saudi population. We evaluated *MTHFR* C677T polymorphism in 106 Saudi psoriasis vulgaris patients and 280 matched healthy controls. *MTHFR* C677T genotyping was performed by PCR–RFLP technique. Allele T and genotypes CT, TT were found to be increased while allele C and genotype CC significantly decreased in psoriasis patients than controls ($p < 0.001$). This study indicates that the T-allele and T-containing genotypes (TT, CT) of *MTHFR* C677T polymorphism are significantly associated with psoriasis while C-allele and CC genotype may be protective for it. BMI, fasting glucose, triglycerides, total cholesterol, low-density lipoprotein and C-reactive protein, known markers for cardiovascular diseases were found to be significantly elevated in the patient group as compared to the controls. It is concluded that the *MTHFR* C677T polymorphism increases psoriasis risk in Saudi patients and ultimately may lead to cardiovascular and other systemic disorders.

BIOGRAPHY

Abdulrahman Al-Asmari has completed his PhD in 1996 from University of London, London, UK. Earlier he received MPhil (biochemistry) on his work entitled "Proteomic studies of snake venoms and their biological activity" from London, UK. He is the director of Scientific Research Center, MSD Riyadh Saudi Arabia. He has over 100 publications that have been cited several times, and has been serving as an editorial board member of various journals.

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Ghaleb Bin Huraib, Res Clin Dermatol 2019, Volume 2

ASSOCIATION OF FUNCTIONAL POLYMORPHISM IN PROTEIN TYROSINE PHOSPHATASE NON-RECEPTOR 22 (PTPN22) GENE WITH VITILIGO SUSCEPTIBILITY

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Vitiligo is an acquired, autoimmune skin disorder characterized by melanocyte loss resulting into progressive depigmentation of skin and hair. Several genes have been implicated in the pathogenesis of vitiligo. The protein tyrosine phosphatase non-receptor 22 (PTPN22) gene, which encodes the lymphoid tyrosine phosphatase (LYP) protein, is a non-HLA gene associated with autoimmune diseases. The functional PTPN22 C1858T (R620W) polymorphism is widely associated with an increased risk for vitiligo in Europeans however controversy exits in other populations. The aim of this study was to determine if the PTPN22 C1857T polymorphism confers susceptibility to vitiligo in Saudi population. Genomic DNA was extracted and amplified using tetra primer ARMS-PCR method for detection of PTPN22 C1857T polymorphism. We genotyped 125 Saudi vitiligo patients and 200 healthy controls. The frequencies of alleles and genotypes in patients and healthy controls were compared. The frequency of T- allele and CT genotype of PTPN22 C1858T polymorphism was significantly higher while the frequency of C-allele and CC genotype was lower in patients as compared to controls (P 0.0001). The homozygous genotype TT was absent in both the patients and controls. These results indicated that individuals containing allele T are susceptible to vitiligo. We conclude that PTPN22 C1858T polymorphism is strongly associated with susceptibility to vitiligo with a relative risk of >97 and can be developed as biomarker for evaluating vitiligo risk. However, further studies on PTPN22 C1857T polymorphism in larger samples from different geographical areas and ethnicity are warranted.

BIOGRAPHY

Ghaleb Bin Huraib has completed his PhD in dermatological and venereal diseases from Fribourge 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 genetic basis of dermatological diseases.

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