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Absence of GSTT1 and polymorphisms in GSTP1 and TP53 are associated with the incidence of acne vulgaris

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Acne vulgaris is a chronic inflammatory skin disease of the pilosebaceous unit affecting most teenagers and numerous adults throughout the world. Present study was designed to assess the association of the presence or absence of GSTM1, GSTT1 and single nucleotide polymorphisms (rs1695) in GSTP1 and (rs1042522) in TP53 gene with acne vulgaris. The cross-sectional case-control study was conducted at the Institute of Zoology from May 2020 to March 2021 and included acne vulgaris patients (N = 100) and controls (N = 100) enrolled in Dera Ghazi Khan district, Pakistan. Multiplex and tetra-primer amplification refractory mutation system-polymerase chain reaction were applied to investigate

the genotype in analyzed genes. The association of rs1695 and rs1042522 with acne vulgaris was studied either individually or in various combinations with GATM1 and T1. A significant association of absence of GSTT1 and mutant genotype at rs1695 (GG) and at rs1042522 (CC) in GSTP1 and TP53, respectively, was found to be associated with acne vulgaris in enrolled subjects. Subjects aged 10 to 25 years and smokers were more susceptible to acne vulgaris. Our results suggest that genotypes of GSTs and TP53 are involved in protection against oxidative stress and may influence disease progression in acne vulgaris.

Key Words: Acne vulgaris; GSTT1; GSTM1; rs1695 in GSTP1; rs1042522 in TP53.

Biography

Dr. Furhan Iqbal has a PhD from Medical University Vienna in Austria. He has also a post doc in Molecular Genetics from University of Science and Technology in China. At present, he is serving as Associate Professor of Zoology at Bahauddin Zakariya University Multan, Pakistan.. He has published more than 125 papers in reputed journals and his area of research is human genetics and parasitology.

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