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## Study of calprotectin gene polymorphism and serum level in Acne vulgaris patients

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**Background:** Acne vulgaris (AV) is an inflammatory skin disease of the pilosebaceous unit. S100A8 and S100A9 (the light subunits of calprotectin) gene polymorphism has been known to be associated with inflammatory disorder. Till now, no study investigated calprotectin gene polymorphism in acne patients.

**Methods:** This case-control study included 50 patients having variable degrees of acne vulgaris (AV) severity, in addition to a control group of 26 age and sex matched seemingly healthy volunteers.

**Results:** Acne vulgaris patients had considerably greater ( $p < 0.001$ ) mean serum calprotectin levels than the control group ( $3.86 \pm 2.58$  pg/ml vs  $0.29 \pm 0.14$ ). AA genotype of Calprotectin S100 A8 (rs3806232) was significantly predominated than AG or GG genotypes in patients compared to the controls and A allele

was significantly ( $p < 0.001$ ) predominated in patients (80%) while A and G alleles were equally distributed in controls, also there was a significant higher serum calprotectin level in calprotectin AA genotype than in AG or GG ( $p < 0.001$ ) in acne vulgaris patients.

**Conclusion:** The serum levels of calprotectin were considerably greater in AV patients than in controls. AA genotype and A allele of the S100 A8 gene were significantly higher in patients, which was associated with significantly higher calprotectin serum levels. Thus calprotectin both gene and serum level might participate in disease pathogenesis which needs further studies.

**Keywords:** Calprotectin, Acne vulgaris, Gene Polymorphism.

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