IL1A (-889) gene polymorphism is associated with the effect of diet as a risk factor in Acne Vulgaris.

Ibrahim AA¹, Salem RM¹, El-Shimi OS², Baghdady SMA³, Hussein S⁴.

Author information
1 Faculty of Medicine, Dermatology and Andrology, Benha University, Benha, Egypt.
2 Faculty of Medicine, Clinical and Chemical Pathology, Benha University, Benha, Egypt.
3 Faculty of Medicine, Medical Biochemistry, Benha University, Benha, Egypt.
4 Resident at Hehia Central Hospital, Benha, Egypt.

Abstract

BACKGROUND:
Despite the several studies suggesting the genetic basis of acne vulgaris, the exact genetic architecture of this very common condition is not yet clear.

AIM OF THE WORK:
This study aimed to investigate the association between IL-1A (-889) gene polymorphism and acne vulgaris in a sample of patients.

SUBJECTS AND METHOD:
Blood samples from 100 patients with acne vulgaris and 100 healthy age, sex, and BMI matched controls were obtained. DNA samples were isolated from blood cells, and the PCR-RFLP method was used for genotyping.

RESULTS:
The genotype distributions of IL-1A (-889) polymorphism were as expected under Hardy-Weinberg equilibrium. T allele was predominant in the patients, while C allele predominated in the control subjects (P value < .001). The frequency of TT genotype in patients was significantly higher than in the control subjects (P value < .001). CT genotype was significantly more frequent in the control subjects compared to patients (P value < .001). Among the 47 patients who reported diet as a risk factor for triggering or exacerbating their lesions, 62.5% had TT genotype (P value = .038).
CONCLUSION:
IL-1A (-889) gene polymorphism has a role in the pathogenesis of acne vulgaris. We suggest that the triggering or exacerbating effect of diet on acne may be related to IL-1A (-889) gene polymorphism.

© 2018 Wiley Periodicals, Inc.