

## INTERACTION OF IL-17A (RS2275913-G/A) AND IL-17F (RS763780 T/C) GENE VARIANTS WITH ACNE VULGARIS

Abbas A. Ennad, Manal M. Kadhim

Al-Qadisiyah University, College of Medicine, Department of Medical Microbiology, Al-Diwaniya, Iraq

### ABSTRACT

**Objective.** Acne vulgaris is a prevalent dermatological disorder with a complex etiology that affects pilosebaceous units and manifests both as inflammatory and non-inflammatory skin conditions. The present preliminary study was aimed at evaluating the expression of IL-17A and IL-17F gene polymorphisms in acne vulgaris patients and their relationship to the severity of the condition.

**Methods.** Sixty acne vulgaris patients and 60 healthy individuals (control group) were recruited for the study. Demographic information was obtained from the participants. Also, blood samples were collected and used to isolate DNA. The detection of IL-17A and IL-17F gene polymorphisms was assessed using tetra-primer amplification refractory mutation system-polymerase chain reaction (ARMS-PCR).

**Results.** There was no significant ( $p > 0.05$ ) difference between patient and control groups in the correlation between the IL-17A gene polymorphism and acne vulgaris disease in all codominance and recessive modes, but the AA and G/A genotypes can be regarded as risk factors (OR = 2.77 and 2.19, respectively) concerning the etiological fraction (EF = 0.346 and 0.331, respectively). Also, there was no statistically significant ( $p = 0.275$ ) difference between the two groups in terms of the genotypes and allele frequencies for the IL-17F SNP. However, the risk analysis revealed that the CC (OR = 3.42) and T/C genotypes (OR of 1.37) may be taken into account as risk factors and etiological fractions for acne vulgaris.

**Conclusion.** This preliminary study suggests that AA and G/A genotypes in IL-17A and CC and T/C genotypes in IL-17F may be risk factors for acne vulgaris.

**Key words:** acne vulgaris; interleukin-17; polymorphism, genetic.