

Functional IL -18 gene polymorphisms might encode a risk factor in the development of recurrent oral ulceration

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Objective: A clinical investigation of the potential associations of two single nucleotide polymorphisms (SNPs) at positions -137 (G/C) and -607 (C/A) in the promoter region of the IL-18 gene, with a susceptibility to RAS and BD.

Patients and Methods: This study included 80 RAS patients assigned as Group1 (Gp1), and 80 BD patients (Gp2), who were diagnosed according to The International Study Group (ISG) criteria for diagnosis of BD (1990). Eighty (age and sex matched) healthy subjects (Gp3) were also included. IL-18 SNPs at -607 and -137 regions were analyzed using polymerase chain reaction-restriction fragment length polymorphism (PCR-RFLP) analysis. Serum IL-18 levels were measured in all our participants. Result: The genotype and allele distributions of the two SNPs did not differ significantly between patients with RAS and controls. However, the genotype and allele distributions at -607 SNP was significantly different between BD patients [CC (p=0.044), C allele (p=0.043), A allele (p=0.043)] and controls. The frequency of the GG genotype at position -137 was higher in both RAS (OR=1.2, CI=0.65-2.3, p=0.5) and BD patients (OR=1.4, CI=0.76-2.7, p=0.27).

Conclusion: Although the IL-18 gene polymorphisms were not associated with susceptibility RAS, a positive association was found with BD patients regarding -607 promoter site.

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