Toll like receptor gene polymorphisms in egyptian patients with Behçet`s*disease*

Thesis
Submitted for partial fulfillment
Of the MD degree in Medical Microbiology and Immunology

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ABSTRACT

Behçet's disease (BD) is a multisystem inflammatory disease characterized by recurrent orogenital ulcerations, ocular inflammations, and skin lesions. The etiology of the disease is currently unknown but evidences suggested that there is a strong genetic component mediating the chronicity of the disorder. The disease is characterized by infiltration of lymphocytes and neutrophils into the affected organs

APCs (antigen presenting cells)express receptor called (TLR) Toll like receptor which are one of PRR (pattern recognition receptor) and essential components of the innate immune system and they are a class of proteins play a key role in the innate immune system,recognize structurally conserved molecules derived from microbes.This study aimed at investigating the the possible associations between two SNPs (Single Nucleotide Polymorphisms) at TLR1 gene and TLR3 gene and BD in 87 Egyptian patients with BD and 87 healthy control.

Methodology: blood samples were collected and DNA extraction done.Genotyping of TLR1 gene (1805T/G) ,and TLR3 gene (1377 C/T) were performed using (PCR-RFLP) and we found

In TLR1 gene (1805 T/G) :

a- Patients with BD had significantly lower frequency of TT genotype and significantly higher frequency of TG , GG genotypes than healthy control

b- Patients with arthritis had significantly lower frequency of TT & TG, patients with activity had significantly lower frequency of GG genotype .

c- Patients with activity had significantly lower frequency of T allele , it might be protective allele and patients with arthritis had significantly lower frequency of G allele, it might be protective allele .

In TLR3 gene (1377 C/T)

a- patients with BD had significantly lower frequency of CC genotype and higher frequency of CT genotype than healthy control.

b- patients with vascular involvement had significantly lower frequency of TT genotype.

c- BD patients with vascular involvement had significantly lower frequency of C allele than patients without involvementit might be protective allele . In conclusion, this preliminary study indicates that there are some genotypes in TLR1 gene (1805T/G) ,and TLR3 gene (1377 C/T) over-represented , other less presented in BD indicating that they may play a role in BD susceptibility in Egyptian patients.