

## Original Paper

# Association of ApE1 gene Asp148Glu polymorphism and idiopathic male infertility

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## Abstract

**Background and Objective:** Despite enormous progress in the understanding of human reproductive physiology, the underlying cause of male infertility remains undefined in about 50.0% of cases, which are referred to as idiopathic infertility and affects about 5.0-7.0% of the general male population. Human apurinic/aprimidinic endonuclease (ApE1) is a multifunctional protein that has an important role in the base excision repair (BER) pathway. ApE1 SNP T>G found in exon 5 led to substitution of Asp>Glu at codon 148. This study was done to evaluate the association of ApE1 Asp148Glu polymorphism and the risk of idiopathic male infertility.

**Methods:** In this case-control study, blood samples were collected from 90 patients diagnosed with idiopathic male infertility and 90 healthy men, genotyped by Allele-Specific PCR (AS-PCR) method by using specific primers that were designed and the association between genotype and allele frequencies in cases and controls were estimated.

**Results:** There was no significant association between ApE1 gene polymorphism at codon 148 in case and control groups.

**Conclusion:** No significant association was found between the Asp148Glu polymorphism and idiopathic male infertility.

**Keywords:** Infertility, Male, Polymorphism, ApE1 gene

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