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The association of SEPS1 (selenoprotein S) gene -105G>A polymorphism with idiopathic male infertility

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Background: Infertility, described as the inability to become pregnant after at least 1 year of regular and unprotected coition. The etiology is still unknown in about 50% cases and it is named "Idiopathic infertility". SNP is one of the genetic reasons in infertility. Testis selenium concentration is the utmost. Se failing or low status may cause various generating disorders, such as impaired fertility. High levels of ROS are finded in semen samples of 25% to 40% of infertile men. Different antioxidants is available to protect spermatozoa against oxidants, and Selenium is a strong antioxidant. SEPS1 encoding gene is located on chromosome 15q26.3 and it has selenocysteine at the active site. In this study SEPS1 gene -105G>A promoter polymorphism were evaluated in men with idiopathic infertility.

Methods: Genomic DNA was prepared from peripheral blood leukocytes of 126 infertile patients (male with idiopathic infertility in north of Iran) and 140 healthy controls. After DNA extraction, Polymorphism were identified by using PCR-RFLP for the genotyping of this polymorphism.

Results: According to statistical analysis, this polymorphism has a significant association (OR: 3.97, 95% CI 2.03-7.78, P=0.0001) with male infertility. Compared with the GG genotype, carrying the A allele was significantly associated with increased risks of idiopathic male infertility (OR: 3.65, 95% CI 1.93-6.89, p= 0.0001)

Conclusion: As results indicate the probable impact of SEPS1 gene -105G>A promoter polymorphism in association with idiopathic male infertility in the corresponding population, this polymorphism may play an important role in increasing ROS levels in cells. Larger population-based studies are needed for clarifying the relation between SEPS1 polymorphism and male infertility.

Biography

Mona Mahdavi Saeidi is 28. She has completed her B.Sc of Microbiology from Islamic Azad University Lahijan Branch and M.Sc. of Genetics from Biology faculty Department of sciences, University of Guilan-International unit. She was technical manager of Sumtech reference laboratory for 3 years.

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