9th Yazd International Congress and Student Award on Reproductive Medicine with 4th Congress of Reproductive Genetics

Oral Presentations

O-44

Comparison of polymorphism 139 C> A (rs737008) of protamine 1 gene in infertile men with diagnosis of oligospermia and asthenospermia referred to Gerash Infertility Treatment Center from 2016 and 2017

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Background: The male infertility accounts for about half of infertility in couples. The idiotypic asthenospermia and oligospermia, which mostly occur as a result of genetic mutations, are among the main causes of male infertility.

Objective: Until now, the relationship between different SNPs in the protamine1 (*PRM1*) gene and male infertility has been reported. In this study, we evaluated the possible correlation between 139 C> A (rs737008) SNP in the *PRM1* gene and asthenospermia/oligospermia in patients who referred to the Gerash Infertility Center.

Materials and Methods: Three groups were considered in this study including healthy fertile males, asthenospermia patients, and the patients suffering from oligospermia. After DNA extraction from their blood samples, the PCR was carried out to amplify a 558 bp *PRM1* gene fragment. Then, the RFLP technique was performed to identify the SNP in the PCR products.

Results: Our results showed that the frequency of the 139 C> A (rs737008) SNP in the population study was 41%. We found no significant differences between the SNP and asthenospermia/oligospermia in the current study. According to the demographic data, no significant differences were also found between smoking or alcohol consumption and male infertility in this study.

Conclusion: In this study, no significant relationship between male infertility and the frequency of the rs737008 polymorphism was observed. It seems that a wider investigation on the other SNPs within the protamin gene will help us to provide more reliable information in this context.

Key words: *Polymorphism, Protamin, Asthenospermia, Oligospermia, Male infertility.*