Title: Investigation of azoospermic factor regions (AZFc and AZFd) microdeletions among infertile men with nonobstructive azoospermia from North West of Iran

Abstract: Introduction: The Y-chromosome azoospermic factor (AZF) regions include genes whose specific roles and functions in spermatogenesis have not been completely clarified. Hence, recognition of the association of AZF microdeletions with male infertility has suggestions for the diagnosis, treatment, and genetic counseling among infertile patients. In this work, we determined the incidence of Y chromosome AZF regions microdeletions in infertile men with non-obstructive azoospermic. Material and Methods: The descriptive -analytical study was performed between January 2012 and October 2012 on 47 infertile men with non-obstructive azoospermic and normal karyotypes referred to Infertility Center of Alzahra Hospital of Tabriz. Molecular AZF screening technique was performed on the genomic DNA from peripheral blood samples. We used Multiplex PCR and three different sets of sequence-tagged sites (STS) for detecting the microdeletions in Y-chromosomal AZF regions and the Y specific sequences. Statistical analysis was evaluated by Statistical software (SPSS, Chicago, IL, USA) version 11.2. Results: Among the 47 infertile men, a total of 17 cases (17/47, 36.17%) were found to have deletions in the regions of AZFc and AZFd. Of the 17 azoospermic subjects harbouring Y chromosome microdeletions, fourteen in AZFc, two in AZFc+d and one in AZFd regions. P value &lt; 0.05 was considered to be statistically significant. Conclusion: From the results, Y chromosome microdeletions analysis recommend as an important molecular test among infertile males to obtain reliable genetic information before the administration of assisted reproductive techniques and will help decrease the cost and technical difficulty of the procedure.

azoospermic factor, STS, spermatogenesis, microdeletions, male infertility

Presentation: Poster