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Frequency of AZF gene microdeletions in infertile men in Kazakhstan

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Background/Aim: Determine AZF gene microdeletions` in infertile male.

Materials and Methods: Since November 2014 till March 2015 22 males aged 20-39 years old with absence of children in marriage and 10 healthy males choosing 80 people, who were examined during the last year, were taken withdrawal of ejaculate for carrying out spermogram, withdrawal of venous blood for defining microdeletion in AZF gene. 22 males of main group with azoospermia and oligospermia of hard level (less than 5 million spermatozoids) and 10 males of control group with normozoospermia were tested for microdeletion of AZF gene. Exception criteria: patients with congenital anomalies of reproductive organs. To hold analysis of microdeletion of 13 locuses in AZF gene there was used venous blood with EDTA. The research was held with the help of multiplex PCR method in real-time mode.

Results: In the whole, 32 cases were analyzed, which include 17 cases with azoospermia (n=17), with oligospermia (n=5), with normospermia (n=10) for prevalence rate of deletion in AZF gene of Y chromosome. Among 22 males suffering infertility, who had conclusion of spermogram as azoospermia and oligospermia, 8 were diagnosed microdeletions in different locuses of AZF gene of Y chromosome. Frequency of microdeletions was 35.29 % (6 out of 17) among the group of patients with azoospermia comparing to the group of patients with oligospermia (40 %). In a control group males with normospermia were not diagnosed deletions.

Conclusion: The frequency of AZF deletions was defined among patients with azoospermia (35.29 %), 40 % - patients with oligospermia. These results are different from the data published which says that deletions of male with azoospermia were defined in 10 – 15 % of cases and 5-10 % of cases with oligospermia. Probably it may be connected with small-sized groups of patients to research. In next reports will be displayed research data with bigger range of patients. However, it is worthwhile to say that in a review of literature authors observed high frequency (51.6 %) of microdeletions among the patients with azoospermia. Such variation might be explained by ethnic and geographical differences, patients' criteria choice, and range of sampling.

Biography

Lazza Tuleyeva - MPH. Senior Researcher in theLaboratory of molecular diagnostics, Scientific Center of Urology named BU Jarbussynov, Almaty, Kazakhstan. She has published more than 30 papers in reputed journals.

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