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Poster Presentations

P-122

Prevalence of cytomegalovirus in semen of male partners of infertile couples and the virus impact on sperm parameters

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Background: Genital tract infection is one of the causes of male infertility. Several studies have shown a role for human cytomegalovirus (CMV) in this context. In the present study, the prevalence of CMV in a population of male partners of infertile couples was estimated and the impact of CMV on sperm parameters was determined.

Objective: In the present study, the prevalence of CMV in a population of male partners of infertile couples was estimated and the impact of CMV on sperm parameters was determined.

Materials and Methods: In this cross sectional study, CMV DNA and virus copy number were examined in

the semen of 150 participants including 80 with normal semen analysis (SA) and 70 with abnormal SA, by quantitative Real-Time PCR. Sperm parameters were compared between CMV positive and negative groups. Comparisons with p-values under 0.05 were considered significant. Logistic regression was performed to control the effect of some variables with $p < 0.25$ on sperm parameters.

Results: CMV DNA was detected in the semen of 28 (18.6%) individuals. 21 men (30%) with abnormal SA and 7 (8.8%) with normal SA were positive for CMV DNA ($p = 0.001$). The mean virus copy number was 883.1 ± 4662.01 for the men with abnormal SA and 2525.7 ± 12680.9 for those with normal SA ($p = 0.001$). Sperm count was $(32.1 \pm 23.5) \times 10^6$ in CMV positive and $(44.2 \pm 24.1) \times 10^6$ in CMV negative groups ($p = 0.022$). Normal sperm morphology was $2.73 \pm 2.83\%$ and $5.99 \pm 5.44\%$ in CMV positive and negative groups, respectively ($p < 0.001$). After controlling some variables, the sperm morphology remains the only statistically significant sperm parameter that was reduced by CMV.

Conclusion: The higher CMV prevalence in the semen of males with abnormal SA compared to normal SA and significant reduction of sperm morphology in the presence of CMV, are in favor of the negative impact of CMV on male fertility.

Key words: Cytomegalovirus, Male infertility, Polymerase chain reaction.

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