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Seroprevalence of HSV-2 among infertile men with abnormal sperm parameters compared to those with normal sperm

Abstract:

Herpes simplex virus type 2 (HSV-2), a common sexually transmitted infection, has been linked to male infertility since its association was first reported by the World Health Organization in 2000. Infertility is defined as the inability to achieve pregnancy after one year of unprotected intercourse. HSV-2 can lead to various reproductive complications, but its seroprevalence among infertile men in Iran remains unexplored. To address this gap, we conducted a case-control study examining the seroprevalence of HSV-2 among multiple subgroups of infertile men with abnormal sperm parameters and those seeking sex selection services. Between July 2023 and February 2024, blood samples were collected from infertile males undergoing fertility treatment and those seeking sex selection at Avicenna Infertility Clinic in Tehran. Demographic data were gathered via questionnaires. Anti-HSV-2 IgG antibodies were detected using an ELISA kit from Vircell, Spain. Of 486 eligible samples, 420 underwent testing across different groups: control (98), Teratozoospermia (32), Asthenozoospermia (45), Oligoteratozoospermia (48), Azoospermia (50), and Teratozooasthenospermia (147). Thirteen samples tested positive for HSV-2 IgG antibodies—3.41% in cases and 2.04% in controls—with seven positives from the Teratozooasthenospermia group. Age (43.15 ± 5.10 vs 37.74 ± 6.20) and marriage duration (12.54 ± 6.88 vs 8.12 ± 4.95) were significantly higher among positive individuals. This study enhances our understanding of HSV-2 epidemiology among individuals seeking infertility treatment in Tehran, revealing a relatively low seroprevalence of HSV-2 IgG antibodies that increases with age and may negatively impact sperm motility and morphology.

Biography

Somayeh Shatizadeh Malekshahi has completed her PhD at the age of 32 years from Tehran University of Medical Sciences. She is an assistant professor in the Department of Virology, Faculty of Medical Sciences at Tarbiat Modares University (TMU) Tehran, Iran. She has published more than 50 papers in reputed journals.