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Study of infertility in female with *Staphylococcus aureus* infection and its relation with some bacreria superantigens

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Abstract

Aim and Background - *Staphylococcus aureus* can be caused different infections in human. Bacterial infection of the cervix can be effective in spermatozoid parameters change and may be come infertility in women. The aim of this study was identification of *Staphylococcus aureus* super-antigenes from infertile women with unexplained infertility.

Materials and Methods - Hundred vaginal samples were isolated from unexplained infertile women. Positive samples for *Staphylococcus aureus* with at least three antibiotic resistances were analyzed by PCR. For identification of infection effect on infertility, after incubation of fresh sperm samples ubated with the *Staphylococcus aureus* consist one of *seg*, *sei* or *Tsst-1* genes, were measured sperm parameters.

Results – *Staphylococcus aureus* was selected from 52 samples. After antibiogram test, 19 *Staphylococcus aureus* samples were identified with resistance to three or more antibiotics. Frequency of *Tsst-1*, *sei* and *seg* genes were, (26.3%) ,(21.1%) and (10.5%), respectively. There were in 11 (57.9%) isolates, *sei*, *seg* or *Tsst-1* genes. As also, 10.5% of isolates had both of *seg* and *sei* genes. One strain (5.3%) with *seg*, *sei* and *Tsst-1* genes, could be agglutinated 50% of fresh sperms without any significant changes on motility and viability.

Conclusion - The results were indicated *Sphylococcus aureus* that is caused vaginal infection could be damage the morphology and motility of male spermatozoa. In summary, treatment of bacterial vaginosis could be effective for prevention of idiopathic infertilities in infertile couples rates.

Keywords: *Staphylococcus aureus*, Super antigen, infertility, PCR.

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