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STD pathogens determined in semen using PCR and flow-through hybridization technology

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Background: The prevalence of sexually transmitted diseases (STDs) among hotel-based sex workers (HBSWs) in Karachi, Pakistan, was studied. These hotel workers are considered as high risk group because of their age, economic independence, low education and residence in a place away from their family.

Aim: The aim of this study was to access in health care facilities for diagnosis and common pathogens of STDs, those causing infertility and *Chlamydia trachomatis*, *Neisseria gonorrhoeae* and *Mycoplasma hominis*. Genital wart is a highly contagious sexually transmitted disease caused by some sub-types of human papillomavirus (HPV).

Material & Methods: Semen samples were obtained by masturbation into sterile containers after sexual abstinence of 48 to 72 hours. Samples were subjected to semen analysis within one hour of collection and processed for freezing within two hours of collection. The concentrations of sperm as well as sperm motility were also determined. DNA extraction was extracted from all the samples and the PCR assay was performed. The amplicons are subsequently hybridized to pathogen-specific capturing probes via “Flow-through” hybridization.

Result: During our study, we came across the STI pathogens present in our population and the reason for infertility was these pathogens. When *Chlamydia trachomatis* and *Neisseria gonorrhoeae* were detected, their wives were also screened and these STI pathogens were identified.

Conclusions: The main route for the transfer of STI pathogens were the men those who visited commercial sex workers or hotel-based sex workers as they were working in other cities and the complained for infertility. Screening for bacterial STI pathogens, *Mycoplasma hominis*, *Chlamydia trachomatis* and *Neisseria gonorrhoeae* are strongly recommended because these pathogens can cause serious reproductive complications such as pelvic inflammatory disease, and ectopic pregnancy.

Biography

Rubina Ghani is Professor/ Molecular Biologist at Baqai Medical University/Pathological & Molecular Laboratories, Pakistan

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