

Infectious and non-infectious findings in infertile men with asymptomatic chronic prostatitis: Sperm Sediment Cytology vs DNA-screening

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Objectives The aim of the study was to assess molecular and cytological examinations of semen sediment in their respective capacity to identify causative agents.

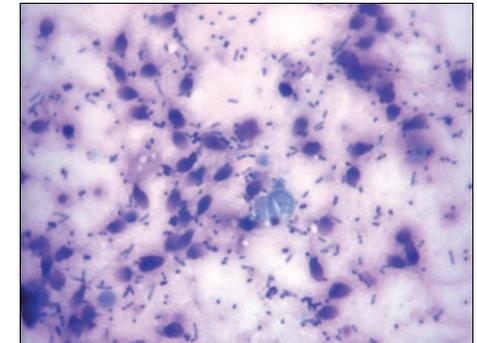
Methods The cross-sectional study was conducted using a 8-years database of 22 patients, aged 30-55 years, with chronic prostatitis, infertility of 1-13 years duration and multiple unsuccessful attempts of assisted reproductive technology (ART). As laboratory methods sperm sediment liquid-based cytology (SSC) was compared with molecular tests in Sperm Sediment Medium (SSM) using real-time polymerase chain reaction (PCR) for bacteria and viruses including low/high-risk HPV.

Results Twelve (12) (54,5%) cases were found by PCR as normal. In 4 (33%) of these cases cytological examination showed mixed microbiota; in 2 of these cases *Leptothrix* and reticular body in cells (*Chlamydia*) were detected. Moreover, 10 samples reflected degenerative changes of glandular epithelium with histiocytes. One case was suspicious for malignancy. 10 (45,5%) samples showed dysbiosis which correlated with cytological findings. Furthermore, in 3 (30%) of these cases *Entamoeba histolytica*, *Trichomonas*, and chlamydia-associated cells were found by SSC. Significantly, two (9%) cases disclosed - HPV-findings by cytology which was confirmed by PCR (genotypes 6,32,58).

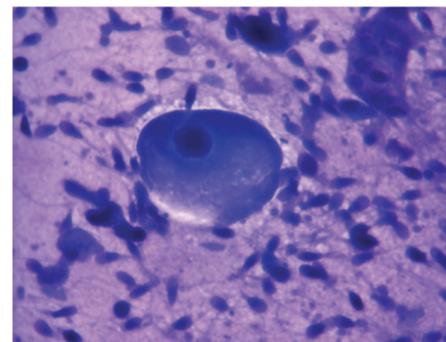
Conclusion Investigation of asymptomatic infertile men by PCR and SSC using SSM offers definitive and complementary significant diagnostic findings which help in arriving at the diagnosis giving proper immediate feedback to the physicians. Seminal infections appear to lead to glandular dysfunction which may have an influence on fertility.



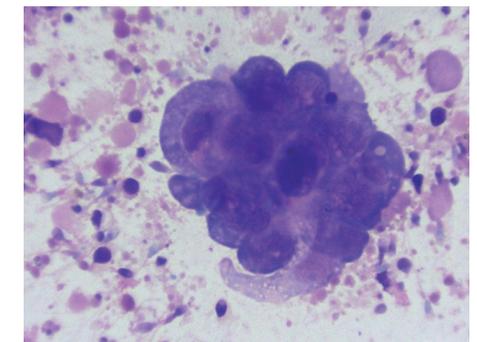
hrHPV-finding
MGG. x 100 oil immersion objective



Entamoeba histolytica, mixed microbiota
MGG. x 100 oil immersion objective



CMV-finding
MGG. x 100 oil immersion objective



Malignant finding
suspicion for testicular seminoma
MGG. x 100 oil immersion objective

URN05

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