
The effect of urogenital mycoplasmas on semen quality: an experience from a teaching hospital in Saudi Arabia

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Abstract Objectives: (1) To study the relationship between the presence of urogenital mycoplasmas (*ureaplasma urealyticum* and *mycoplasma hominis*) (Uu,Mh) and the abnormal results of semen specimens from patients complaining of infertility. (2) To check the efficacy of the mycofast kit for the detection and antibiotic susceptibility testing of urogenital mycoplasmas.

Methods: Two hundred and twenty-five seminal fluid specimens collected from patients complaining mainly of infertility, who attended various clinics at King Khalid University Hospital (KKUH) Riyadh, were investigated. The investigations included examination of semen parameters according to World Health Organisation (WHO) standards. The mycofast screen and confirmation kit (Mycoplasma International-France) was used to detect the presence and antibiotic susceptibility of urogenital mycoplasmas according to the manufacturer's directions.

Results: Urogenital mycoplasmas were grown from 58 (25.8%) of specimens. Fifty-four specimens grew Uu alone while 4 specimens showed mixed growth of Uu and Mh. The parameters mostly affected were the volume, sperm count, the % viable count and motility. None of these parameters showed a statistically significant difference when compared to the mycoplasma negative specimens. Out of the 54 Uu isolates, 13 were resistant to ciprofloxacin while 4 were resistant to tetracycline, minocycline and ciprofloxacin. On the other hand, 3 isolates were resistant to tetracycline and minocycline.

Conclusions: No statistically significant difference was found between semen quality from urogenital mycoplasma positive and urogenital mycoplasma negative semen specimens. Therefore, male fertility appears not to be affected by the presence of urogenital mycoplasma thus screening of semen specimens for the presence of urogenital mycoplasma is not recommended.

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Ureaplasma urealyticum (Uu) and mycoplasma hominis (Mh) are unique types of small free living bacteria (0.2-0.3 μ m), that lack a cell wall. They grow slowly and require special media for growth. Liquid media are often used for their growth. In these media the growth of mycoplasma can be detected by the change of pH which is demonstrated by use of appropriate metabolic markers.^{1,4}

Because of the difficulty in growing mycoplasma in routine laboratories, many commercial kits and media were developed to enhance their isolation, identification and anti-microbial susceptibility.

Uu and Mh are frequently isolated from the lower genital tract of normal sexually active men

and women.¹ They have been associated with a variety of clinical conditions including: non-gonococcal urethritis (NGU); pelvic inflammatory disease (PID); abortion and involuntary infertility. Many studies showed their insignificance in relation to infertility.⁵⁻⁹ However, few others indicated their indirect involvement in male infertility as suggested by abnormal results of semen analysis.⁵⁻⁹

The aim of this study was to examine the relationship between the presence of urogenital mycoplasma (Uu/Mh) and the abnormal results seen in semen samples from patients complaining of infertility. The study also aimed to check the efficacy of the mycofast screening and confirmation kit in isolation and antibiotic

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