

TRICHOMONIASIS AS SEXUALLY TRANSMITTED DISEASE IN SEX PARTNERS

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Study of 30 male consorts of 30 cases of vaginal trichomoniasis with high levels of parasitic infection was undertaken to evaluate the sexually transmitted role of trichomoniasis in sex partners. There were 20 symptomatic and 10 asymptomatic male partners, who revealed *T. vaginalis* in 80.0% and 60.0 of the cases respectively and the overall prevalence was 73.3% (22 Of 30). *T. vaginalis* was detected in 83.3% male with urethritis and 50.0% males with prostatitis. Detection of trichomonas in urethral discharge, morning drop secretion, urine deposit and prostatic fluid was 80.0%, 50.0%, 35.7% and 21.4% in that order. It is evident from these results that the sex consorts of all cases of trichomoniasis should be considered as harbouring *T. vaginalis* in their genito-urinary tract as carriers and be treated to break the chain of transmission. Fontanna smear was superior to culture and wet mount in the detection of *T. vaginalis*, the success rates being 73.3%, 63.3% and 53.3%. A good correlation was observed between smear and culture at high levels of parasitic infection.

Key words : Trichomoniasis, STD role, Sexually Transmitted Diseases

Introduction

Trichomoniasis continues to be a sexually transmitted disease (STD) affecting genital and urinary tracts of both sexes with high prevalence in females who are usually the source and the male acting as carriers of this infection. *Trichomonas vaginalis* has been detected in 10 to 37% of males with non-specific urethritis by different workers.^{1,2} Men are usually asymptomatic and in symptomatic males urethritis, prostatitis, balanoposthitis, epididymo-orchitis and haemospermia have been documented.³ Trichomoniasis of the median raphe of the penis has been reported.⁴ The present study was carried out at Lady Goschen Hospital, Mangalore, to find out the prevalence of trichomoniasis in male partners of known infected females.

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Materials and Methods

We investigated 30 male partners, aged 22 to 45 years, of an equal number of infected women diagnosed to have trichomoniasis with high levels of *T. vaginalis* in their vaginal discharge (Fig.1 and 2). There were 20 symptomatic males with moderate to profuse watery or frothy discharge and 10 asymptomatic cases without any noticeable discharge.

The materials for laboratory investigation included urethral discharge, morning drop of secretion from urethra, centrifuged deposit of first-stream urine and prostatic fluid. In symptomatic males urethral discharge was studied, while in asymptomatic males and symptomatic males not revealing *T. vaginalis* in 2 consecutive samples of urethral discharge, specimens such as morning drop, centrifuged urine deposit and prostatic fluid were investigated.

All specimens were microscopically examined by wet mount and by Fontana-stained smears,⁵ and cultured by swab inoculation in semisolid agar CPLM medium,⁶ at pH 6.4. After 5 days incubation at 35°C, the culture bottles were shaken vigorously and the water of condensation collected in a Pasteur pipette was examined for motile trichomonas.

Results

Trichomonas vaginalis was detected in 22 out of 30 males thus revealing an overall prevalence of 73.3% trichomoniasis in male consorts of infected females. Detection of the parasite was 80.0% (16 of 20) in symptomatic cases, while it was 60.0% (6 of 10) in asymptomatic partners. Out of 20 symptomatic males, *T. vaginalis* was detected in 15 (83.3%) of 18 cases of urethritis, while the parasite detection was in 1 (50.0%) of 2 cases with prostatitis.

Urethral discharge of 20 cases revealed *T. vaginalis* in 16 cases with detection rate of 80.0%, while morning drop, urine deposit and



Fig.1. Microphotograph showing *T. vaginalis* in significant numbers at the surface of vaginal epithelial cells. Fontana stain, x800.

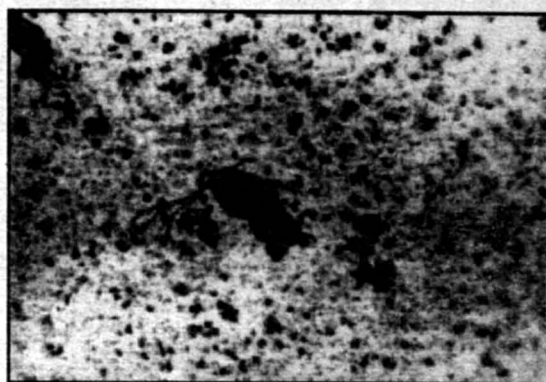


Fig.2. Microphotograph showing *T. vaginalis* with tuft of flagella in Fontana smear of urethral discharge from male partner, x1000.

prostatic fluid in 14 cases showed the parasite in 7, 5 and 3 cases thus revealing the parasite detection rate of 50.0%, 35.7% and 21.4% respectively.

Different laboratory methods had variable success rate in the detection of *T. vaginalis*. The success rate of 73.3% (22 of 30) was achieved by Fontana stained smears, whereas culture and wet mount methods revealed success rate of 63.3% (189 of 30) and 53.3% (16 of 30) respectively.

Discussion

T. vaginalis is capable of causing either infestation or infection. When the parasite infests, it is virtually found without acute inflammation clinically or cytologically, and in the present series there were 10 asymptomatic and 20 symptomatic male consorts, who revealed the parasite in 60.0% and 80.0% of the cases respectively. In men trichomoniasis may remain as latent and symptomless or may cause persistent and recurring genito-urinary infections, particularly urethritis.

Different authors^{1,2} have detected *T. vaginalis* in 10 to 37% males with non-specific urethritis, but these studies do not reveal trichomoniasis and its severity in female partners. Our study has shown an overall prevalence of 73.3% trichomoniasis in male consorts of infected females containing high levels of parasites in their vaginal discharge. In the symptomatic group of the present study, the parasite was detected in 83.3% males with urethritis and 50.0% males with prostatitis. This clearly shows that a carefully planned investigation of both sex partners is absolutely essential for permanent cure and elimination of all possible sources of infection.

Men are as susceptible as women for urogenital trichomoniasis. Very often, they are reluctant to be examined or treated, especially when they are asymptomatic and we have encountered a few such cases in our study. Asymptomatic nature of trichomoniasis could be attributed to the flushing action due to frequent flow of urine over the urethral mucosa.

The sex partners of all cases of trichomoniasis should be considered as harbouring the parasites in their genitourinary tract as carriers and have to be treated to break the chain of transmission.

Detection of *T. vaginalis* in urethral discharge, morning drop urine deposit and prostatic fluid was 80.0%, 50.0%, 35.7% and 21.4% in that order. Based on these findings, we believe that urethral

discharge and morning drop specimens are ideal for investigation of trichomoniasis in males. As a routine urethral discharge could be examined on 2-3 consecutive days. In men not revealing the parasites in their urethral discharge and in asymptomatic males, *T. vaginalis* could be demonstrated in morning drop specimens collected on 2 separate occasions. Importantly, our study has revealed the superiority of Fontana stained smear (73.3%) over culture (63.3%) and wetmount (53.3%) methods for detection of *T. vaginalis*, since it is extremely easy to locate the parasites which appear as ovoid, brownish-black flagellate bodies, even if scanty or dead (Fig.2). We have also observed a good correlation between smear and cultural methods at high levels of parasitic infection.

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