

TRICHOMONAS VAGINALIS - AN INDICATOR FOR OTHER SEXUALLY TRANSMITTED INFECTING AGENTS

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The present study is based on 350 women having sexually transmitted diseases and 68 men counterparts. *Trichomonas vaginalis* was a significant contributor in 216 (61.7%) out of 350 female STD cases and in 56 (82.3%) out of 68 male counterparts. Further, out of 216 cases of *T.vaginalis*, 41 cases (32.5%) were associated with infection with candida species; 29 (23%) with *Neisseria gonorrhoea*, 18 cases (14.3%) with *Haemophilus ducreyi* and 11 cases (8.7%), *Chlamydia trachomatis*. *Treponema pallidum* was observed in 8 cases (6.3%) which constituted a low percentage. Present study highlighted the importance of *T. vaginalis* by showing positivity in two-third cases which suggested that it can be an important indicator for other etiological STD agents in women.

Key words : Sexually Transmitted Disease, *Trichomonas vaginalis*

Introduction

The present time has witnessed the changing scenario of the etiological agents of the sexually transmitted diseases (STD) and has completely outcasted the past pattern of microbial agents.¹ *Trichomonas vaginalis*, one of the most significant etiological agents, had been pointed out as an indicator for presence of other etiological agents.² It has been recognised to have an association with other organisms like *N. gonorrhoeae*, *Chlamydia trachomatis*, *Candida Sps.*, *Pediculosis pubis*, genital wart, *Treponema pallidum* and *H.ducreyi*.^{2,7}

Materials and Methods

The study is based on 350 female cases of STD attending Outpatient Department of Skin and STD and Department of Obstetrics and Gynaecology. Specimens were processed at De-

partment of Microbiology. All the subjects were in the age group of 20-30 with history of excessive vaginal discharge. *T. vaginalis*, *C. trachomatis*, *Candida Sps*, *N.gonorrhoeae*, *Pediculosis pubis*, genital wart, *Treponema pallidum* and *H. ducreyi* were identified and confirmed. Serodiagnosis was done for *Chlamydia trachomatis* and *Treponema pallidum*. Male counterparts were evaluated as and when available. Only 68 female patients with positive *T.vaginalis* finding, with their male partners could be followed up for *T. vaginalis* investigation. Final identification was done according to the criteria of NACO,⁸ Finegold⁹ and WHO Manual SOPM for GC.¹⁰

Results

Table I represents that two- third of our study cases have shown *Trichomonas vaginalis*. The *Candida Sps* were found in almost half of the cases. One-fifth of the cases were positive for *N. gonorrhoeae*. Other organisms were seen in less than 10% cases.

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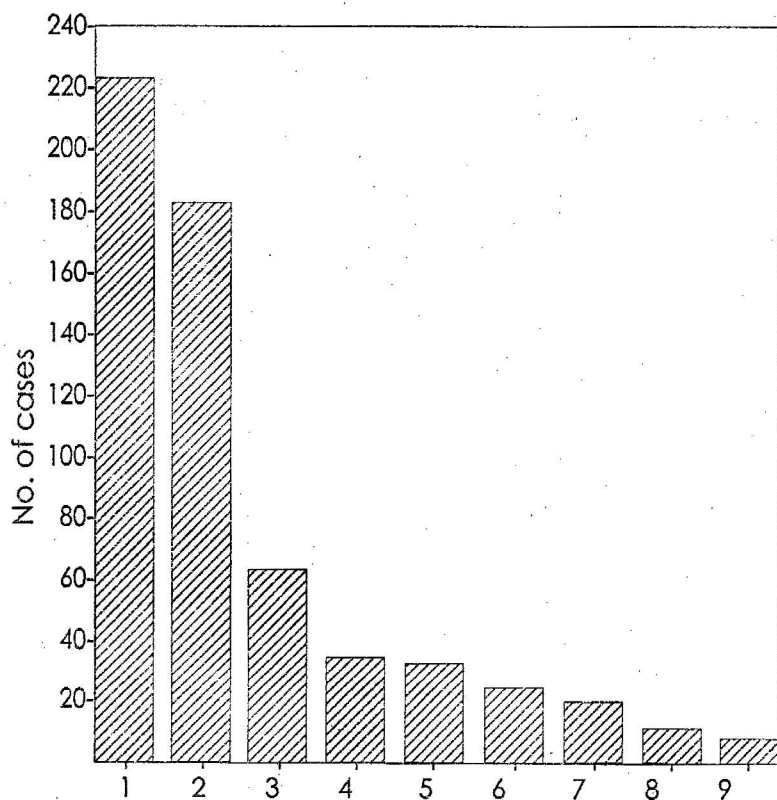
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Table I. Microbial flora in female STD cases

Name of organisms	No. of cases (n = 350)	Percentage
1. <i>Trichomonas vaginalis</i>	216	6.7
2. <i>Candida Sps.</i>	180	51.4
3. <i>N. gonorrhoeae</i>	65	18.6
4. <i>T. pallidum</i>	34	9.7
5. <i>C. trachomatis</i>	32	9.1
6. <i>H. ducreyi</i>	21	6.0
7. <i>Pediculosis pubis</i>	15	4.3
8. Genital wart	10	2.8
9. <i>Herpes genitalis</i>	07	2.0

Table II. Association of *Trichomonas vaginalis* with other microorganisms in female STD cases

Name of organisms	Association of <i>T. vaginalis</i> with other organisms (n= 126 (58.3%))	
	No.	Percentage
1. <i>Candida sps.</i>	41	32.5
2. <i>N.gonorrhoeae</i>	29	23.0
3. <i>H. ducreyi</i>	18	14.3
4. <i>C.trachomatis</i>	11	8.7
5. Genital wart	09	7.1
6. <i>Herpes genitalis virus</i>	09	7.1
7. <i>T. pallidum</i>	08	6.3
8. <i>Pediculosis pubis</i>	01	0.8



Bar diagram showing microbial flora in female STD cases

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|---------------------------------|-----------------------|
| 1. <i>Trichomonas vaginalis</i> | 2. <i>Candida Sps</i> |
| 3. <i>N. gonorrhoeae</i> | 4. <i>T. pallidum</i> |
| 5. <i>C. trachomatis</i> | 6. <i>H. ducreyi</i> |
| 7. <i>Pediculosis pubis</i> | 8. Genital wart |

Table II indicates that out of total 350 cases, 216 were positive for *T. vaginalis*. Further, 126 cases out of 216 cases of *T. vaginalis* were having association with *candida sps* in 32.5% cases, *N.gonorrhoea* in 23.0% and *H. Ducreyi* in 14.3% cases in comparison to association with *T. pallidum* (8 cases; 6.3%). This difference was statistically significant ($p < 0.05$). This is because of rigid criteria for selection of STD cases.

Discussion

The microbial flora pattern of the STD was supposed to be headed by *T. pallidum* followed by *N. gonorrhoeae* and *C. trachomatis* but present time had witnessed the inclusion of large number of etiological agents and their insertion has completely changed the scenario of mi-

crobial flora pattern. The present study has isolated *T. vaginalis* in 61.7% of STD cases and had been reported in 28.4% and 29.1% previously.^{5,6}

This organism is significantly associated with candida sps (32.5%) which requires a strong acidic pH. The local poor hygienic condition, and colonization of the candida help in colonization and multiplication of *T. vaginalis*. In our limited follow up study of 68 cases out of 216, male part could be studied and *T. vaginalis* was seen in 56 cases (82.3%) which holds that complete eradication, is possible only in cases where counterparts are effectively treated with appropriate medication.

This study thus suggests that *T. vaginalis* is an indicator for other sexually transmitted infecting agents.

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