

## Urethral trichomoniasis in Iraqi females.

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### Summary:

**Background:** *Trichomonas vaginalis* has long been recognized as a cause of infectious vaginitis in women. Different studies have demonstrated a significant burden of the parasite to cause urethritis as well. It has been assumed that the localization of parasite in the urethra may be responsible for the recurrence of vaginal infection.

**Aim:** To evaluate the infection rate of urethral trichomoniasis and to evaluate two different laboratory methods used in the diagnosis.

**Methods:** The present study consisted of 420 female patients presented with vaginal discharge with or without itching or disorient, investigated for urethral trichomoniasis who were compared to 50 females represented the control group.

Each female was asked to collect first 10-20 ml of urine in a sterile screw capped bottle; the deposits were examined microscopically by:

1. Wet mount method for *Trichomonas vaginalis*.
2. Culture in a specific ready made culture media.

At the same time high vaginal swabs were taken and examined by both wet mount and culture methods for vaginal trichomoniasis.

**Results:** Among 420 female patients examined for both urine sediments and vaginal swabs ,80 (19.04%) females were found to be positive for *T. vaginalis* by vaginal swabs. The parasite was seen either in the vagina alone in 39 (9.28%) or in the vagina and urethra in 41(9.76%), but it was never isolated from urethra alone.

**Conclusion:** *Trichomonas vaginalis* is a common parasite of female urethra as well as of the vagina, the localization of this flagellate in the urethra may be responsible for the recurrence of vaginal infection, since it may survive in the urethra, possibly in the Paraurethral glands (skene's) so when the treatment is limited to the vagina, this will often fail to reach the urethra and the trichomonads may contaminate the vagina following urination or sexual intercourse, that is why systemic rather than local treatment is indicated .

**Keywords:** *Trichomonas vaginalis*. Trichomoniasis. Urethritis.

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### Introduction:

*Trichomonas vaginalis* is a pathogenic motile protozoan, which is frequently seen in the purulent, frothy secretion of women presenting with vaginal discharge with or without genital irritation. It is the causative agents of trichomonas vaginitis. In females trichomonads are found most often in the vagina, then in the urethra (1,2) and more rarely in skene's glands, Bartholin's, cervix and urinary bladder (3,4,5). In males, however it infects the urethra, bladder, prostate and seminal vesicles. The symptoms of dysuria, frequency of urination and sometimes urethral discharge are so slight, thus the male is often an asymptomatic carrier (1,6,7). Patients and methods:

This study was conducted in the period from November 1992 to August 1993 on 420 female patients attending the Gynecological and Antenatal Outpatient Clinic Baghdad Medical City where the

majority were complaining of vaginal discharge with or without pruritis vulvae, or dysuria. These patients were compared with 50 females representing the control group attending the same clinic and presenting with symptoms other than infection.

Each female was asked to collect the first 10-20 ml of urine in a sterile screw capped bottle, this sample was centrifuged at 1000 RPM for 5 minutes. The supernatant fluid was poured off and the deposit was examined microscopically by:

1. Wet mount method.
2. Culture in artificial media /ready made Difco-Bacto Kupferberg *Trichomonas* medium (8).

All these patients were subjected to high vaginal swab examination for vaginal trichomoniasis which was evaluated by wet mount examination and culture on a special media.

### **Results:**

The ability of *Trichomonas vaginalis* to cause urethritis was tested in this study, each female was asked to the first 10-20 ml of urine in a screw capped bottle, from which urine sediments were

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examined. The total number examined was 470 sediments, 50 of them represented the control group and 420 urine sediments represented the patients group.

As shown in table (1) and table (2), among 420 urine sediments examined ,80 patients were positive for *Trichomonas vaginalis*, the parasite was found either in the vagina alone or in the vagina and urethra, but it was never isolated from urethra alone.

The distribution of parasite is shown in table (1). In 41 females the parasite was found both in vagina and urethra, in 39 patients, *Trichomonas vaginalis* was recovered from vagina alone, In none of the

cases it was isolated from urethra alone. Similar findings were obtained in the control group, 4 positive cases of *Trichomonas vaginalis* were observed, in 2 of them the parasite was found in vagina and urethra, while in the other 2 cases the protozoan was recovered from vagina alone and in no case *Trichomonas vaginalis* was isolated from urethra alone. The overall infection rate of urethral trichomoniasis among patients was (9.76%), and in the control group it was (4%).

Different laboratory methods were used in this study to recover *Trichomonas vaginalis* from both vaginal swab and urine sediments as shown in table (3).

**Table (1): Frequency of urethral trichomoniasis as reported in female patients and controls.**

Site of infection	Number of positive cases in patients		Number of positive cases in controls	
	%	No.	%	No.
Positive in vagina	19.04	80	4	8
Positive in vagina and urethra	9.76	41	2	4
Positive in vagina and negative in urethra	9.28	39	2	4
Positive in urethra and negative in vagina	0			0
Total positive cases		80		4

**Table (2): Urethral trichomoniasis among 420 female patients in comparison to 50 females from the control group.**

Patients			Control		
Total number examined	Positive cases for urethral trichomoniasis	Percentage %	Total number examined	Positive cases for urethral trichomoniasis	Percentage %
420	41	9.76	50	2	4

**Table (3): Evaluation of two methods used in the diagnosis of *Trichomonas vaginalis* infection from vaginal swabs and urine sediments.**

	Number of patients examined	Positive direct smear		Positive culture		Positive culture and negative direct smear		Total positive cases	
		No.	%	No.	%	No.	%	No.	%
Vaginal swabs	380	17.89	68	21.05	80	3.15	12	21.05	80
Urine sediments	360	5.55	20	7.22	26	1.66	6	26	7.22

## Discussion:

This study was conducted to detect the frequency of urethral trichomoniasis among 420 female patients compared to 50 females representing the control group, which showed an infection rate of (9.76%) among the patients, and (4%) in the control group. At the same time these patients were investigated for vaginal trichomoniasis since their major complaint was vaginal discharge with or without itching, sometimes associated with dysuria. In some of them the only complaint was dysuria.

Vaginal trichomoniasis were reported in 80 female patients, 41 of them were positive in both vagina and urethra, while in 39 patients *Trichomonas vaginalis* was recovered from vagina but not from urethra, in none of the patients the parasite was isolated from urethra but not from vagina, similar findings were observed in the control group. These results may be compared with those obtained by Kean in 1955 (9) and Al-Malah in 1981 (10). It is worthwhile mentioning that *Trichomonas vaginalis* is a common parasite of the female urethra as well as of the vagina, the localization of the parasite in the urethra may be responsible for the recurrence of vaginal infection. The flagellate may survive in the urethra, possibly in the Paraurethral glands (skene's) so when the treatment is limited to the vagina, this will often fail to reach the urethra and the trichomonads may contaminate the vagina following urination or sexual intercourse, that is why systemic rather than local treatment is indicated (9).

Regarding the laboratory diagnostic methods, some investigators stated that unstained wet preparation were quite useful for the diagnosis of trichomoniasis and they found that culture of *Trichomonas vaginalis* was not much reliable than wet mount preparation (11,12). On the contrary other investigators found the culture method superior to the wet mount method (13,14). Our study agrees with those who considered the culture method to be superior to the wet mount examination.

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