

INCIDENCE OF *TRICHOMONUS VAGINALIS* IN DIFFERENT GROUPS OF WOMEN⁺

Aml H. Al-Falahi^{*}

Abstract

A total of (400) vaginal swabs and discharge from (200) women of different groups and different ages, attending to the private Obstetrics and Gynecology clinics, were examined in the laboratory by two different methods (Wet and Fixed preparations), for the detection of *Trichomonas vaginalis* (*T. vaginalis*) parasite.

The rate of infection in symptomatic women group is higher than in other groups and according to the statistical analysis there is no significant differences between the two methods used in laboratory, so the wet preparations are quite useful for the diagnosis of *T. vaginalis* if the stain is not available in the laboratory.

المستخلص

فحصت (٤٠٠) مسحة مهبلية وإفرازات مهبلية مأخوذة من (٢٠٠) من النساء اللواتي يترددن على العيادات النسائية الخاصة من مختلف الأعمار ومن مجاميع مختلفة للتحري عن وجود طفيلي المشعرات المهبلية فيها.

أشارت النتائج الى أن نسبة وجود هذا الطفيلي في مجموعة النساء اللواتي تعاني من أعراض مرضية أعلى من نسبة وجوده في بقية المجاميع الخاضعة للفحص ، وقد فحصت النماذج مختبرياً باستخدام طريقتين هما (طريقة المسحة الرطبة وطريقة المسحة الثابتة) . وقد أثبت التحليل الاحصائي ومن خلال القيم المحسوبة أنه لا يوجد فرق معنوي في نسب النتائج الموجبة التي أعطتها أيّاً من الطريقتين في مختلف المجاميع .

وعليه يمكننا استخدام طريقة المسحة الرطبة لغرض تشخيص الطفيلي في النماذج المرضية لكونها طريقة تحتاج الى مواد ومستلزمات بسيطة ومتوفرة في حالة عدم توفر الصبغة.

Introduction

Trichomoniasis is a specific infection with *Trichomonas vaginalis*, a flagellated protozoan, it is one of the most common causes of sexually transmitted infection [1].

The infection is usually transmitted by a male carrier during sexual intercourse; women may infect other by contact or through contaminated toilet, articles , to towels and rarely by rubber gloves, vaginal specula [2].

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^{*}Institute of Medical Technology \Almansour

Trichomonal infection has spread in every continent, every class, every race and climate and it is of great social, economical and medical importance [3].

Trichomoniasis may be diagnosed by direct smear examination, culture of the organism, cytologic studies and serological test [4].

In 1985 [5] recorded an infection rate by *T. vaginalis* (4.86%) and he collected the vaginal swabs in winter, [2] in 1994 recorded an infection rate (19.6%) in different groups of (patients) women, and finally in 1999 [1] found that (2.4%) of family planning attendants (not patient) have *T. vaginalis*.

Materials and Methods

Women investigated were attending the private Obstetrics and Gynecology clinics, some complained of vaginal discharge, itching, pelvic pain, odor and bleeding as well those requesting contraceptives, pregnant women and vaginitis.

The medical history, contraceptive, sexual history and the history of vaginitis or other pelvic disorders were recorded.

400 vaginal swabs were examined (2 swabs from each woman) in laboratory by:

1. Wet Film Preparations

- Different methods were applied for each swab and a simple wet film was made from the vaginal swab diluted by:
A: Warm sterile normal saline [6].
B: 0.5% methylene blue in distilled water (wet stained smear).
- The wet preparations were examined microscopically for the presence of pus cells, epithelial cells, *T. vaginalis*, monilia and bacteria.

2. Fixed Preparations

- Dry fixed preparations of undiluted vaginal swabs were fixed high over a flame and stained by Gram's stain to be examined [7].

Results

The results of our study are shown in Table (1), (2) and (3).

Table (1): Percentage of *T. vaginalis* present in different groups of different ages

Group of women	No. of women	No. of swabs	<i>T. vaginalis</i> +ve	% of +ve
Symptomatic women	50	100	12	24
Using oral contraceptives	50	100	6	12
Use of antibiotics in the past (2) months	50	100	8	16
Pregnant women	50	100	9	18

Table (2): Percentage of positive results of *T. vaginalis* according to the method used in laboratory

Group of women	Wet preparations	Stained preparations (wet
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		and fixed) %
Symptomatic women	22	24
Using oral contraceptives	10	12
Use of antibiotics in the past (2) months	16	16
Pregnant women	16	18

Table (3): Statistical analysis of the results

Group of women	Z	P- level
Symptomatic women	- 0.2364	0.8130
Using oral contraceptives	- 0.3179	0.7504
Use of antibiotics in the past (2) months	Zero	1
Pregnant women	- 0.2648	0.7911

Discussion

1. Positive Results

- The results referred to us present high percentage of women who suffered from vaginitis resulting from *T. vaginalis* infection especially in symptomatic women group.
- In women using oral contraceptives, the percentage of *T. vaginalis* (12%) was lower than the percentage of the same organism present in other groups, this may be due to trichomonocidal properties of some contraceptives used [8], [9].
- There use of antibiotics in general or any specific antibiotic in the past 2 months was not found to be a risk for *T. vaginalis* [10], and the positive result of this organism in this group is (16%).
- In pregnant women group, *T. vaginalis* was found in (18%) this rate of infection may be due the sexual exposure and the frequency of use toilets, pregnancy may activate a pre-existing infection or render the women more liable to infection [2], [11].
- As a result the percentage of *T. vaginalis* infection in all group of our study was (17.5%).
- The differences in result between our study and the previous studies is probably related to differences in social class, personal hygiene and the mode of living and whether the women involved in study are patient or not.

2. Technique Used in Laboratory

- The simplicity of wet preparation technique, the rapidity of the diagnosis, and the excellent correlation of the results with clinical status has discouraged the use of more uncomplicated methods [11].
- In our study and according to statistical analysis of the results, no significant differences are observed between the two methods so the wet methods are quite useful for the diagnosis of *T. vaginalis* if the stain is not available in laboratory.

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