



Prevalence of Trichomonas Vaginalis Among Women in Babylon Province. Iraq

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Abstract

A total of fifty women attending hospitals in Babylon province during period from October 2022 to February 2023, were examined to investigate their infection with *T.vaginalis*. It was found that 27 women were infected (54%). November and January characterized by high infection (70%). The aged category more than 41 years old exhibited high infection (66.6%) with significant differences on level of $P < 0.05$ than other aged categories. According to residence, urban women show high infection (59.5%) than rural (38.4%) but without any significant differences. All pregnant women in this study found infected (100%) comparison to not pregnant women (50%) with significant differences on level of $P < 0.01$. In concern to marital status, rate of infection among married women was 57.1% while it was 46.1% among single women.

Introduction

Trichomoniasis is caused by a pathogen responsible for one of important sexually transmitted disease (STD). The disease infecting about 248 millions of people worldwide yearly. [1] Potential sequel of Trichomoniasis in females include infertility [2] and cytological abnormalities of the cervix [3]

In Iraq, Trichomoniasis is endemic disease and highly prevalent among women, so it must be studied in different governorates of the country continuously to throw light on epidemiological map for this disease, many previous studies in Iraq provided data concerning prevalence, risk factors and diagnostic procedures [4,5,6,7,8,9,10,11,12,13,14,15]

Trichomonas vaginalis infection in Babylon still not well studied, and its epidemiological map unknown, so our present study aimed to investigate data of this disease in Babylon province.

Materials and Methods

Vaginal swabs were taken from women (symptomatic and asymptomatic) by inserting sterile metal speculum without any lubricant or solution, swabs were taken in tubes with 0.5ml normal saline solution (0.9% NaCl) for wet mount test, tubes in laboratory shaken and slides were prepared for immediate examination under the microscope to detect the motion of *T.vaginalis* [16].

Statistics

Chi-Square test (χ^2) were used to compare between data [17].

Result and Discussion

From the total women examined (50) twenty-seven women found infected with *T.vaginalis* (54%). According to months of the study, November and January exhibited high infection (70%) (Table 1). This high infection maybe due to decline the health awareness, or maybe due to asymptomatic feature of the disease, which enhance more infections among population without any treatment or medical care. The present rate of infection come in agreement with [13] who reported that infection in Babylon was 50%. In concern to aged categories of the examined women, the aged category more than 21-40 years old show high infection (72.7%) than other aged categories with significant differences on level of $P < 0.05$ (Table 2).

The above result corresponded with [6] who found that infection with *T.vaginalis* increased among women aged 30 years and more, maybe attributed to increase level of reproductive hormones that play a role to increase Trichomoniasis, these hormones increased in young ages of women and decreased in older ones. All the pregnant women that examined found infected (100%) with significant differences on level of $P < 0.01$ comparison to non-pregnant women (Table3). The high



infection in pregnant women maybe because the hypertrophy and hyperplasia of vaginal epithelium or due to glycogen deposits in the epithelial cells of vagina , the high infection of pregnant women found compatible to [4,5] whom reported that rate of infection among pregnant women were more than non-pregnant women .

The marital status appeared that married women were more infected (57.1%) than singles (46.1%) but without significant differences (Table 4) , in his study [7] reported that married women much infected (61.58%) than singles (31.8%) , this maybe related to high

infection with Trichomoniasis among husbands whom considered the source of infection to wives ,one study [4] found that infection with Trichomoniasis in males reached to 63.8% .

The present study explain that residence affected in rate of infection , since urban women found more infected (59.5%) than rural (38.4%) (Table 5) , it maybe related to population density per area in urban province , while rural lived in houses far from each other , which maybe decrease the level of contamination . The researcher [10] in Basrah support our finding by recording high infection in urban women (83.3%)

Table 1 : Effects of seasons on rate of infection with *T. vaginalis* among women

Months	No. Examined	No. Infected	%
Oct	10	6	60
Nov	10	7	70
Dec	10	3	30
Jan	10	7	Ns70
Feb	10	4	40
Total	50	27	54

Ns= non significant

Table 2 : prevalence of trichomoniasis among women regarding to age

Age/Year	No. Examined	No. Infected	%
7-20	7	2	28.6
21-40	22	16	72.7*
>40	21	9	42.8
Total	50	27	54

*= P<0.05

Table 3 : Rate of infection with trichomoniasis among pregnant and non pregnant women

Pregnancy	No. Examined	No. Infected	%
Pregnant	4	4	100**
Non-pregnant	46	23	50
Total	50	27	54

**= P<0.0

Table 4 : Prevalence of *T.vaginalis* among women due to marital status



Marital Status	Patient Examined	Patient Infected	%
Married	37	21	Ns57.1
Singles	13	6	46.1
Total	50	27	54

Ns = non significant

Table 5 : Prevalence of *T.vaginalis* among women according to residence

Residence	No. Examined	No. Infected	%
Rural	13	5	38.4
Urban	37	22	Ns59.5
Total	50	27	54

Ns= non significant

Conclusions

- 1- *Trichomonas vaginalis* infection is more prevalent in Babylon province , which poses a reproductive health risk, such as increase chance of infection with HIV and adverse pregnancy outcome
- 2- Married and urban women were more infected with the disease

Recommendations

- 1- high infection with *T.vaginalis* in Babylon province required rapid intervention by health institutions
- 2- Conducting epidemiological studies for *T.vaginalis* continuously to epidemiological mapping
- 3- Using DNA technology (PCR) in the future epidemiological studies to increase the accuracy of the results.

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