Global Journal of Medical Research: E
Gynecology and Obstetrics
Volume 18 Issue 2 Version 1.0 Year 2018
Type: Double Blind Peer Reviewed International Research Journal
Publisher: Global Journals
Online ISSN: 2249-4618 & Print ISSN: 0975-5888

Prevalence of Trichomonas Vaginalis Infection among Reproductive Age Women Admitted to Soba University Hospital, Sudan

By Mosab Nouraldein Mohammed Hamad
Elsheikh Abdallah Elbadri University

Abstract- *Introduction:* Trichomonas vaginalis is an anaerobic, flagellated protozoan parasite and the causative agent of Trichomoniasis. It is the most common pathogenic protozoan infection of humans in industrialized countries. Infection rates between men and women are similar with women being symptomatic, while infections in men are usually asymptomatic. Transmission usually occurs via direct, skin-to-skin contact with an infected individual, most often through vaginal intercourse. The WHO has estimated that 160 million cases of infection are acquired annually worldwide.

Justification: Trichomonas vaginalis infection may lead to serious complications, then early detection may prevent this complications.

Objectives: To know the percentage of T. vaginalis infection among the selected group.

Material and Methods: Descriptive, cross sectional study, used urine specimens to diagnose T. vaginalis infection among selected group of Sudanese women.

Result: 1.6% were infected with T. vaginalis.

Discussion: The prevalence of Trichomoniasis among the study group is the lowest one in comparison to the previous studies.

Keywords: *trichomoniasis, sudanese, reproductive age, women.*

GJMR-E Classification: *NLMC Code: WC 700*

Strictly as per the compliance and regulations of:

Prevalence of Trichomonas Vaginalis Infection among Reproductive Age Women Admitted to Soba University Hospital, Sudan

Mosab Nouraldein Mohammed Hamad

Abstract- ***Introduction:*** Trichomonas vaginalis is an anaerobic, flagellated protozoan parasite and the causative agent of Trichomoniasis. It is the most common pathogenic protozoan infection of humans in industrialized countries. Infection rates between men and women are similar with women being symptomatic, while infections in men are usually asymptomatic. Transmission usually occurs via direct, skin-to-skin contact with an infected individual, most often through vaginal intercourse. The WHO has estimated that 160 million cases of infection are acquired annually worldwide.

Justification: Trichomonas vaginalis infection may lead to serious complications, then early detection may prevent this complications.

Objectives: To know the percentage of T. vaginalis infection among the selected group.

Material and Methods: Descriptive, cross sectional study, used urine specimens to diagnose T. vaginalis infection among selected group of Sudanese women.

Result: 1.6% were infected with T. vaginalis.

Discussion: The prevalence of Trichomoniasis among the study group is the lowest one in comparison to the previous studies.

Conclusion: Many factors may lead to tat lowest result such as, type of the specimen, small sample size and Religion.

Acknowledgement: I would like to thanks all the staff of microbiology and parasitology department at soba university hospital for their professional work and kind dealing to the patients and researchers.

Keywords: trichomoniasis, sudanese, reproductive age, women.

I. Introduction

Trichomonas vaginalis is an anaerobic, flagellated protozoan parasite and the causative agent of Trichomoniasis. It is the most common pathogenic protozoan infection of humans in industrialized countries. Infection rates between men and women are similar with women being symptomatic, while infections in men are usually asymptomatic. Transmission usually occurs via direct, skin-to-skin contact with an infected individual, most often through vaginal intercourse. The WHO has estimated that 160 million cases of infection are acquired annually worldwide. The estimates for North America alone are between 5 and 8 million new infections each year, with an estimated rate of asymptomatic cases as high as 50%. Usually treatment consists of metronidazole and tinidazole. [1]

Trichomonas vaginalis resides in the female lower genital tract and the male urethra and prostate the number 1, where it replicates by binary fission the number 2. The parasite does not appear to have a cyst form, and does not survive well in the external environment. Trichomonas vaginalis is transmitted among humans, its only known host, primarily by sexual intercourse the number 3.[2]

The most common symptoms among women are:

- Vaginal discharge, which can be white, gray, yellow, or green, and usually frothy with an unpleasant smell
- Vaginal spotting or bleeding
- Genital burning or itching
- Genital redness or swelling
- Frequent urge to urinate
- Pain during urination or sexual intercourse. [3]

a) Potential Complications

Unfortunately, there are still gaps in our knowledge of the natural history of infection in both men and women. However, we know that trichomoniasis in pregnancy can be linked to certain adverse outcomes such as pre-labor rupture of membranes, preterm delivery and low birth weight.

One recent meta-analysis of different randomized clinical trials estimated that pregnant women with trichomoniasis are 1.4 times more likely to experience a preterm delivery in comparison with women without the infection. Furthermore, those neonates sometimes presented with respiratory diseases and vaginitis.

An increased potential of acquiring co-infections with different pathogens (predominantly viruses) is also observed in those with Trichomonas vaginalis. For example, untreated or undetected infections increase the risk of both acquisition and transmission of human immunodeficiency virus (HIV), especially in regions where HIV is endemic.

Data has also shown that there is facilitated transmission of cytomegalovirus (CMV) from pregnant women to their fetuses in those with trichomoniasis.

Author: Medical Laboratory Department, Faculty of Health Sciences, Elsheikh Abdallah Elbadri University. e-mail: musab.noor13@gmail.com

Interestingly, some research groups speculate that Trichomonas may be capable of harboring and carrying other infectious agents from the lower to the upper genital. [4]

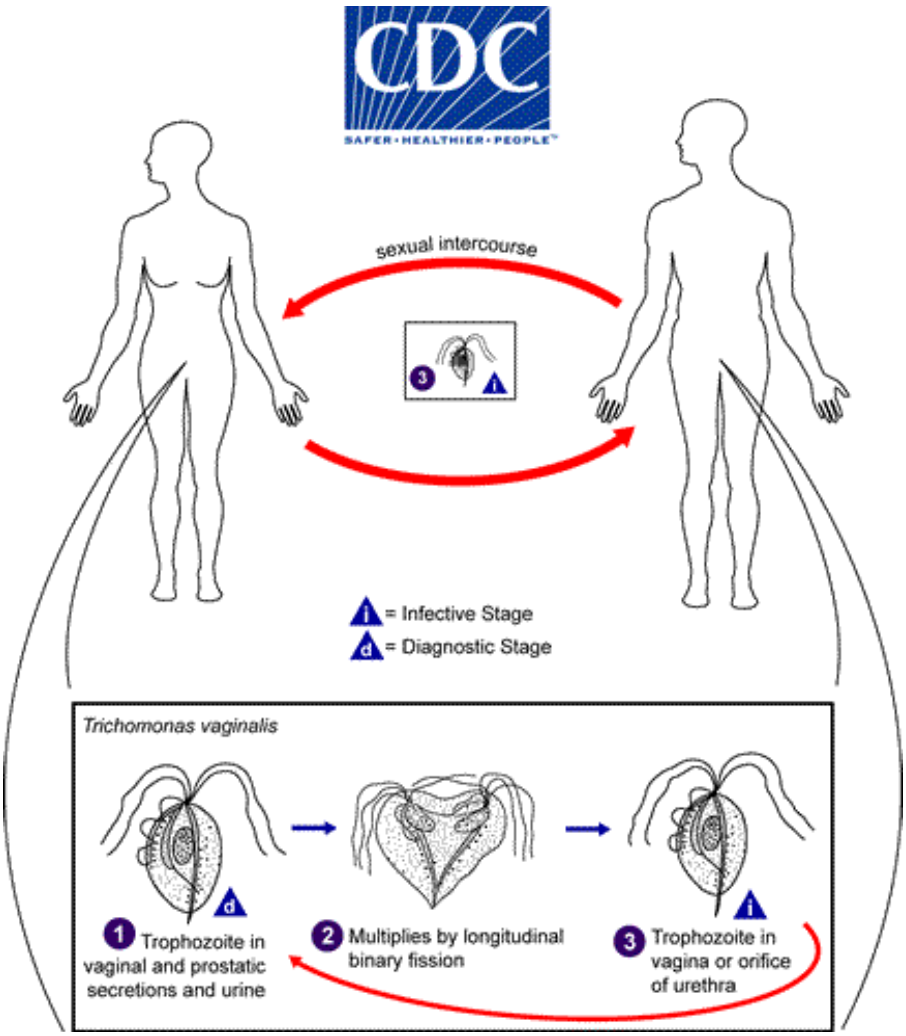

Figure 1: Life Cycle

b) Microscopical Diagnosis

The diagnosis of trichomoniasis has traditionally depended on the microscopic observation of motile protozoa from vaginal or cervical samples, urethral or prostatic secretions and urine. This technique was first described in 1836 by Donne. T vaginalis can be differentiated on the basis of its characteristic jerky movements. On occasion, flagella movement can also be noted. The sensitivity of this test varies from 38% to 82% and is dependent on the inoculum size because fewer than 104 organisms/mL will not be seen. As well, the need for the specimen to remain moist and the experience of the observer are important variables. The size of the trichomanad is approximately the same as that of a lymphocyte (10 μm to 20 μm) or a small neutrophil; when not motile, a trichomanad can be difficult to differentiate from the nucleus of a vaginal epithelial cell. Motility is very dependent on the temperature of the specimen. At room temperature in phosphate-buffered saline, the organism will remain alive for more than 6 h; however, the motility of the organisms becomes significantly attenuated. This wet mount examination is clearly the most cost-effective diagnostic test, but the lack of sensitivity contributes to the underdiagnoses of the disease. Because viable organisms are required, delay in transport and evaporation of moisture from the specimen reduces motility and, consequently, diagnostic sensitivity. [5]

II. Literature Review

Study done by Madeline Sutton et al among reproductive age women in United States showed that; the prevalence of T. vaginalis was 3.1%. [6]

In a cross sectional study performed by FabianeAguair dos AnjosGatti et al at a university hospital in southern Brazil showed that; the overall prevalence of Trichomonas vaginalis (T. vaginalis) was 4.1%. [7]

In study done by PurnimaMadhivanan et al among young reproductive age women in India showed that; 8.5% of participants had T. vaginalis infection. [8]

III. Justification

Trichomonas vaginalis infection may lead to serious complications, then early detection may prevent this complications.

IV. Objectives

To know the percentage of T. vaginalis infection among the selected group.

V. Material and Methods

Study Design: Descriptive, cross sectional study.

Study Area: Khartoum state, soba university hospital.

Study Period: June –September 2016.

Study Population: Reproductive age Women admitted to soba university hospital.

VI. Section Criteria

a) *Inclusion Criteria*

Reproductive age women, resident in Khartoum and admitted to Soba university hospital.

b) *Exclusion Criteria*

Child or aged women, not resident in Khartoum or out patient.

c) *Sample Size*

64 women were participated in the study.

VII. Methods

Specimen: Urine Sample

Technique: Microscopy Examination of urine deposit by 40X objective lens.

VIII. Result

1.6% were infected with T. vaginalis.

IX. Discussion

The prevalence of Trichomoniasis among the study group is the lowest one in comparison to the previous studies.

X. Conclusion

Many factors may lead to tat lowest result such as, type of the specimen, small sample size and Religion.

Acknowledgement

I would like to thanks all the staff of microbiology and parasitology department at soba university hospital for their professional work and kind dealing to the patients and researchers.

References Références Referencias

1. https://en.wikipedia.org/wiki/Trichomonas_vaginalis
2. https://www.cdc.gov/dpdx/trichomoniasis/index.html
3. https://www.healthline.com/health/trichomonas-infection#symptoms
4. https://www.news-medical.net/health/Trichomoniasis-Symptoms-and-Complications.aspx
5. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2095007/
6. https://academic.oup.com/cid/article/45/10/1319/277782
7. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5367685/
8. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3619426/