

## TRICHOMONIASIS AMONG ANTE-NATAL ATTENDEES IN A TERTIARY HEALTH FACILITY, ABEOKUTA, NIGERIA

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[**Sam-Wobo, S. O., Ajao, O. K., Adeleke, M. A. & Ekpo, U. F.** 2012. Trichomoniasis among ante-natal attendees in a tertiary health facility, Abeokuta, Nigeria. *Munis Entomology & Zoology*, 7 (1): 380-384]

**ABSTRACT:** The prevalence of trichomoniasis was carried out among ante-natal attendees at the State Hospital Ijaiye Abeokuta. 200 pregnant women systematically selected were examined. Vaginal swab were collected with sterile swab stick and urine samples were collected into universal container from each respondent of age 16 to 50 years and parasitological examination carried out. Results showed that (19.5%) 39 out of 200 had infection. Highest prevalence was seen among age group (21-25) and the least among age groups (41-45) and (46-50). 1-3 months stage of pregnancy has the highest prevalence of 12.19% for both samples and the least among 7-9months having 6.38% prevalence. Primigravid had higher prevalence of 31-25% than multigravid having 9.67% in both samples. The occupational related prevalence showed that traders have the highest prevalence of (15.38 %) HVS samples (14.28 %) for urine samples and both HVS and urine samples while the least prevalence (0 %) was seen among the students for urine samples and both HVS and urine samples and (6.25%) among the civil servants for HVS samples.

**KEY WORDS:** Trichomoniasis, ante-natal attendees, Abeokuta, Nigeria.

*Trichomonas vaginalis* is a cosmopolitan protozoan parasite which can be transmitted sexually causing trichomoniasis. *T. vaginalis* may be found in the vagina, cervix, urethra external genitalia, prostate, epididymis and semen (1). The prevalence of trichomoniasis Hhas also been known to correlate with sexual activity (2). The infection is common among sexually active adolescent especially where people do not practice safer sex (3).

Trichomoniasis is specifically an infection of the human genito-urinary tract, infecting both male and female where over 180 million women are thought to be infected worldwide (3). *T. vaginalis* infection is the most prevalent non viral sexually transmitted disease in the world (4) where an estimated 5 million women are infected in the United States (5). In Africa, Emarievcoe (6) observed that about 20% of women attending family planning, antenatal or other clinics were infected.

*T. vaginalis* may be emerging as one of the most important cofactors in amplifying HIV transmission, particularly in African-American communities of the United States, where they posited that in persons co-infected with HIV, the pathology induced by *T. vaginalis* infection can increase HIV shedding; and infection may also act to expand the portal of entry for HIV in an HIV-negative persons (1).

Higher prevalence of infection has been reported among women than men (3), which adduced that the reasons could be due to the biological configuration of women, violence against women, poverty and unemployment. Also the use of oral contraceptives which alter the normal environment of the vagina and reduce the

normal lubricating secretions cause trauma or damage to the vaginal wall through which sexually transmitted pathogens like *T. vaginalis* can enter.

The infection is asymptomatic in 10-50% of women (7), however asymptomatic infections can suddenly become symptomatic due to emotional stress, general lowered resistance or changes in pH of the vagina. The common symptoms associated with the infection include, yellowish-white, this watery vaginal discharge which tends to be frothy, vulval itching, dysuria or offensive odour.

Complications of trichomonal vaginitis include premature rupture of membranes, premature labour, low birth weight and post- abortion or post-hysterectomy (6). This report provided the basis for the study in assessing trichomoniasis and its perception among ante-natal attendees in a tertiary health facility of Abeokuta, Southwestern Nigeria.

## MATERIALS AND METHOD

### *Study Area*

The study was carried out at the Ogun State Hospital Ijaiye Abeokuta, the capital city of Ogun State. Abeokuta is located on approximately 7°11'N and 3°21'E in the rainforest with an annual rainfall of 963.3mm.

### *Selection of Study Population*

The study populations were systematically selected based on the number of pregnant women who visited the ante-natal clinic section of the hospital on clinic days.

### *Ethical Consent*

Request and approval to use the hospital for the research study were obtained from the Medical Director and the Ethical Committee. Consent was also obtained from the pregnant women who participated in the study.

### *Collection and examination of Samples*

High vaginal swab and urine samples were collected from each pregnant woman attending the antenatal clinic using the systematic sampling method. High vaginal swabs were collected using sterile swab sticks, while the urine samples were collected inside universal container with each respondent name written on it. The samples were examined using wet microscopy parasitological methods as described by (4).

### *Data analysis*

Analyses into the assessment of the relationship between infection rate and status, in addition to test for significance were carried using SPSS version 16.0.

## RESULTS

From table 1, 22 (11%) respondents are positive for HVS sample, 17 (8.5%) are positive for urine samples.

Age related prevalence of infection showed higher prevalence of 4.5% in HVS samples 3.5% in urine samples and 2.5% in both urine and HVS samples for age group (21-25). The least prevalence was 0.5% among age groups (41-45) and (46-50).

Gestational related prevalence has shown that 1 –3 months stage of pregnancy has the highest prevalence of 12.19% for both samples, 19.51% for HVS only and 17.03% for urine samples only. Least prevalence was seen among 7-9 months pregnancy stage with 6.38% for both samples and 4.25% for HVS and urine samples each.

Relating infection to gravid status of respondents, multigravid had higher prevalence of 9.67% in both samples than the primigravid having 6.58%. Primigravid has a greater prevalence of 13.16% in HVS sample and 9.21% in urine samples unlike the multigravid having a prevalence of 9.67% in HVS samples and 8.06% in urine samples.

The occupational related prevalence of infection showed that the highest prevalence of infection (15.38%) was among the traders for HVS sample result. It also had the highest for urine samples and for both HVS and urine samples (4.28%). The least prevalence was seen among students for urine samples and both HVS and urine samples (0%) while the least prevalence was among civil servant (6.25%) for HVS samples. Generally, the traders had the highest prevalence of infection followed by Artisan, civil servants then students.

## DISCUSSION

The findings of this study showed that Trichomoniasis is prevalent among the pregnant women attending antenatal clinic at the State Hospital Ijaiye Abeokuta. Out of the 200 samples examined, 39 samples were found positive with 19.5% prevalence rate while 161 (80.5%) were negative. The infection was higher in high vaginal swab samples 11% than urine samples 8.5%. From the laboratory examination, it was observed that respondents with heavy infection in their HVS sample also have infection in their urine sample i.e. all positive urine samples also have infection in the HVS sample. The high prevalence of trichomoniasis among the respondent may constitute major health risk to the unborn babies. Maternity homes and antenatal clinics should incorporate diagnosis of trichomoniasis in the routine check up of pregnant women to ensure a timely detection of infection and adequate treatment as a measure to prevent neo-natal infection of trichomoniasis (8).

Age group (21-25) were found to be the highest infected group with prevalence rate of 4.5%, 3.5% and 2.5% for HVS, urine and both samples respectively. While age group (41-45) and (46-50) had the lowest prevalence of 0.5% for all samples. The high prevalence corroborates the findings reported by (3) that trichomoniasis is more prevalent among the more sexually active young people. Generally, increase in the rate of sexually transmitted disease in Nigeria has been obtained on increased poverty, unemployment and violence amongst women and children amongst other factors (9).

The traders have the highest prevalence of trichomoniasis (15.38%) in HVS samples and (14.28%) for urine samples and both samples. The least prevalence (0%) was seen among the students for urine samples and both samples while it is seen among the civil servants for the HVS samples. The high rate of infection amongst the trader may be associated with their active social life with little or no personal preventive measures. The major problem of this class of people may not necessarily be poor personal hygiene (9), although the vegetative trophozoites of *T. vaginalis* could be transmitted through vaginal contamination of toilet seats, the water of toilet bowls, sharing of panties and towel. Finally, sexual permissiveness associated with affluence, lack of awareness, poverty and ignorance of the public health implication, poor sanitary and poor personal

hygiene may likely be upper most in the list of risks factors of Trichomoniasis. It is hoped that public enlightenment to people will aid the prevention and eradication of Trichomoniasis along side with AIDs and other sexually transmitted diseases.

The study has shown a high prevalence of trichomoniasis among the pregnant women attending antenatal clinic at the State Hospital Ijaiye Abeokuta. Sex partners should be treated at the same time to reduce possibility of further transmission. Government should sponsor public health education to enlighten people on the public health implication of the infection Antenatal clinics should incorporate diagnosis of trichomoniasis in the routine check up for pregnant women.

### ACKNOWLEDGEMENT

The authors appreciate the support of the management and ethical board of the hospital and the pregnant women towards the success of the study.

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Table 1. Overall prevalence.

	HVS	%	URINE	%
Positive	22	(11%)	17	(8.5%)
Negative	178	(89 %)	183	(91.5 %)

Table 2. Age Related Prevalence of *T. vaginalis*.

Age group	No examined	Prevalence of		Infection			
		HVS	%	Urine	%	Both	%
16-20	14	2	1	3	1.5	1	0.5
21-25	53	9	4.5	7	3.5	5	2.5
26-30	78	3	1.5	2	1.0	3	1.5
31-35	36	4	2.0	3	1.5	4	2.0
36-40	17	2	1.0	0	-	2	1.0
41-45	1	1	0.5	1	0.5	1	0.5
46-50	1	1	0.5	1	0.5	1	0.5
<b>Total</b>	<b>200</b>	<b>22</b>	<b>11</b>	<b>17</b>	<b>8.5</b>	<b>17</b>	<b>8.5</b>

Table 3: Prevalence of *T. vaginalis* with respect to gestational period.

Stage of Pregnancy	No Examined	HVS		Urine		Both	
		%	%	%	%	%	%
1-3 months	41	8	19.51	7	17.03	5	12.19
4-6 months	111	12	10.81	8	7.21	9	8.11
7-9 months	47	2	4.25	2	4.25	3	6.38

Table 4. Prevalence with respect to gravid status of respondents.

Gravid status	No examined	HVS samples positive with <i>T. vaginalis</i> (%)	Urine samples positive with <i>T. vaginalis</i> (%)	HVS and Urine samples positive with <i>T. vaginalis</i> (%)
Primigravid	76	10 (13.16)	7 (9.21)	5 (6.58)
Multigravid	124	12 (9.67)	10 (8.06)	12 (9.67)
Total	200	22 (22.83)	17 (17.27)	17 (16.25)