© IJCIRAS | ISSN (O) - 2581-5334
September 2020 | Vol. 3 Issue. 4

PREVALENCE OF VULVOVAGINAL CANDIDIASIS IN PREGNANT WOMEN ATTENDING STATE SPECIALIST HOSIPITAL GOMBE, NIGERIA.

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Abstract

This research work titled: prevalence of Vulvovaginal Candidiasis in Pregnant Women Attending State Specialist Hospital was carried out in Gombe State, a total of one hundred (100) samples of high vaginal swabs were collected from the women attending antenatal clinics and screened for the presence of yeast and Trichomonas vaginalis. Out of the 100 samples, fifty eight (58) were from pregnant women with itching symptoms while the microscopic examination shows that 65% of the sample had the yeast cells and 3% Trichomonas vaginalis. The result obtained from culture revealed that yeast growth in 68% of the samples. Germ tube test showed that of the 68 samples of the yielded growth, 36(52.9%) were Candida albicans. Therefore the study indicated high prevalence of vulvovaginal candidiasis in yonger age (19-24) and first trimester of pregnancy.

Keyword:PREVALENCE,VULVOVAGINAL,CANDIDIASIS,Nigeria

1.INTRODUCTION

Candida is a normal commercial organism colonizing the vagina, most especially the candida albican species, however their growth is normally hindered by the Lactobacilli (Parveen et al..2008) Vulvovaginal candidiasis is described as consisting of white cottage cheese dischargewith associate vulva and vaginal inflamention. In a typical infection, sign include oedema, excoriation, vulva erythema. About 10-20 % of healthy women have asymptomatic vaginal colonization with Candida species (Barousee et al., 2004)

About 75 % of women experience at least one form of vulvovaginal candidiasis and up to 6% these women have recurrent infection (Haefner, 1999 and Mardh et al., 2002). The incidience of vulvovaginal candidiasis is highest in women of age 20- 40 years and is rear in prepubertal and postmenopausal women (Ferris et al., 1996, Barousee et al., 2004).

High oestrogen level are thought to make women more susceptible to vulvovaginal candidiasis (Bauters et al., 2002 and Sobel et al., 1998) in pregnancy,vaginal candidiasis is common due to altered pH and sugar content of the vaginal secretions. Increased oestrogen level during pregnancy produces more glycogen in the vagina which has direct effect on candida growth and increases it adherence to the vaginal epithelium. Pregnant women with diabetes are more susceptible and vaginal mycosis is four times higher in them (Parveen et al., 2008) recurrent of vulvovaginal candidiasis can be viewed as relapsing or re-infection this relapsing episode are caused by an identical strain type of Candida albicans. Vazquez et al., (1994). In re-infection vulvavaginal candidiasis either host or microbial factor are responsible. Host factor include use of broad spectrum antibiotics, oral contraceptive pills, intrauterine contraceptive device (IUCD), use of antimicrobial agent. Microbial factor chiefly consist of non candida albicans species mostly Candida glabrata. Behavioral factor that trigger episode of vulvovaginal candidiasis include clothing habit, sexual practices, use of vaginal douches, sanitary practice and diet (Barousee et al., 2004; Sheary and Dayan 2005 and Parveen et al., 2008).

Vaginal candidiasis can cause abortion, candida chorioamnionitis and subsequent pre term delivery. Premature neonates are severely endangered by generalized fungal infection because of their immature immune system. During delivery, transmission can occur from the vagina of infected mother to the newborn

giving rise to congenital candidiasis. Infants with oral thrush can give rise to nipple candidiasis in breast feeding mother. Hence several investigators have recommended routine pre natal screening and treatment of vaginal candidiasis (Omar, 2001 and Parveen et al., 2008).

2. METHODOLOGY

One hundred HVS specimen were collected in duplicate from pregnant women visiting state specialist hospital, Gombe using sterile swab stick. The duplicate swab sticks from each pregnant woman were appropriately labeled indicating age of the pregnant woman and stage of pregnancy. The pregnant woman from whom specimens collected were also asked whether they experienced symptoms of itching at the vagina.

Wet preparation of the specimens collected was carried out as described by cheesbrough (2002) to investigate the presence of yeast cell. This was done by adding two drops of normal saline into one of each duplicate swab sticks, and was mixed properly and a drop on a free grease slide covered with cover slip and examined.

High vaginal swabs specimens on the other duplicate swabs sticks were cultured on sabouraud dextrose agar and incubated 37oc for 3days. All isolates obtained were gram stained to examine budding yeast cell and pseudophyphae.

Germ tube test was carried out on all the yeast isolates to confirmed Candida albican (Cheesbrough, 2002).

3. RESULTS

Out of the one hundred (100) HVS specimens collected from pregnant women fifty eight (58) were asymptomatic for itching. Microscopy of the samples collected showed that 65% had yeast cells while 3% were found to contain Trichomonas vaginalis. Results obtained from culture showed that 68% of the samples yielded growth of yeast while 32% showed no growth as shown on table A below

AGE GROUP (YEARS)	NO. OF SAMPLES OF HVS CULTURED	NO. OF SAMPLES THAT YIELDED GROWTH OF YEAST	% OF SAMPLES THAT YIELDED GROWTH OF YEAST
19-24	39	23	33.8
25-30	35	22	32.4
31-36	14	11	16.2
37-42	9	10	14.7
43 AND ABOVE	3	2	2.9
TOTAL	100	68	100

TABLE B. below shows that highest growth of yeast occurred in samples collected from pregnant women in the first trimester (47%), followed by second trimester (30.8%) and then the third trimester (22.0%).

STAGE OF PREGNANCY (MONTHS)	NO. OF HVS SAMPLE CULTURED	NO. OF HVS SAMPLES YIELDED GROWTH	% OF SAMPLE THAT YIELDED GROWTH
1-3	33	32	47.0
4-6	35	21	30.8
7-9	32	15	22.0
TOTAL	100	68	100

TABLE C. shows the results obtained from gram staining budding yeast cells and pseudohyphae of the samples from positive culture. Germ tube test based on ages of pregnant women showed that 19-24 years had the highest infection due to Candida albicans (41.6%) followed by 25-30 years (25.0%), 31-35 years (16.6%) and ages of 43and above had the lowest (2.8%)

AGE GROUP (YEARS)	NO. OF SAMPLES THAT YIELDED YEAST ISOLATE	NO. OF C. albicans CONFIRMED BY GERM TUBE TEST	% OF C. albicans CONFIRMED
19-24	23	15	41.6
25-30	22	9	25.0
31-36	11	6	16.6
37-42	10	5	13.9
43 AND ABOVE	2	1	2.8
TOTAL	68	36	100

4. DISCUSSION

This studies, consist of 100 HVS Samples collected from pregnant women were analysed for the presence of yeast cells and C. albicans. Microscopy result showed that 65 specimens have yeast cells and three (3) showed T. vaginalis

Culture of HVS samples yielded 68 yeast isolate although only 65 samples showed yeast cell in the microscopic examinations. This implies that microscopy is not sensitive enough to capture all cases of vulvovaginal candidiasis due to yeast, even though it is important in excluding cases of T. vaginalis since it also present itching symptoms. The results obtained from germ tube test on the 68 yeast isolates confirmed 36 of the isolates to be C. albicans, while 32 were yeast other than C. albicans.

The highest prevalence of C. albicans was recorded in the first trimester where 32 pregnant women were positive and less in the second trimester and the third trimester. This could be as the result of change in the hormonal balance during early stage of pregnancy and increase in the production of the oestrogen and gradual gain in balance of hormone in the second trimester and the third respectively (Sobel et al.,1998 and Bauter et al., 2002).

This study also reveal that pregnant women within the ages bracket of 19-24 suffer most from vulvovaginal candidiasis since 15 (41.6%) sample were confirmed positive for C. albicans this may be as the result of lack of experience on how to manage themselves because most women of that age bracket are experiencing their first pregnancy.

In conclusion it is imperative to introduce the diagnosis of vulvovaginal candidiasis as duty during antenatal care most especially for women within the ages of 19-24 years whome may likely be experiencing their first pregnancy and in the first trimester.

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