

AGE AND MARITAL DISTRIBUTIONS OF GENITOURINARY CANDIDIASIS AMONG SYMPTOMATIC WOMEN IN NIGERIA

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SUMMARY: Candida-positive genital specimens (n=585) examined by direct mount wet preparation, consisting of high vaginal swabs (83%), endocervical swabs (14%) and urine (2.9%) collected from symptomatic female genitourinary candidiasis patients attending hospitals and medical laboratories in seven Nigerian cities. Age and marital status of each patient were documented at time of specimen collection. Each specimen was then cultured on Sabouraud Glucose Agar at 37°C for 48 hours and examined under X40 power of a light microscope. Candida species were further identified by the CHROM Agar method. Results showed that the married accounted for 55.1% of cases while 44.9% were unmarried. Among the married the age group 26-30 years had the highest occurrence of 25.8% (significant at p=0.05). Fifteen-twenty years age group had 1.1% while 41 years plus were represented by 0.8%. The unmarried were represented by 10.3% in the age group 15-20 years. The married also had higher occurrences in all the seven cities though the differences were insignificant. Marital factor seems to play a role in the distribution of genitourinary candidiasis in the most vulnerable age group.

Key Words: Genitourinary candidiasis, Distribution, Marital status.

INTRODUCTION

Candida species usually reside without ill effect, as part of an individual's normal microflora but when the microflora balance is disrupted, they transform into a pathogenic state (1) causing a disease called candidiasis which is an opportunistic infection. Opportunistic infections of the genitourinary tract due to fungi are presently becoming more prevalent (2,3). Pregnancy, sexual promiscuity, use of drugs and contraceptive pills have

been identified to significantly affect the incidence of genitourinary candidiasis (4-7). These factors are common in youths and middle-aged people (8). Sexual transmission is the most common and most important means of spread of genitourinary candidiasis (9, 10).

Very little information is available on the influence of marital factor on the incidence of genitourinary candidiasis. Although Enweani *et al.* (11) reported that marital factor had no effect on the prevalence of genitourinary candidiasis, Sehgal (5) and FMOH (4) were of the view that marital factor was important. Moreover, most campaigns for the control of sexually transmitted infections and HIV/AIDS prescribe marital fidelity and abstinence from pre-marital sexual experience (4,12).

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This investigation, therefore, sought to document how age and marital factor would influence genitourinary candidiasis distribution among symptomatic female patients who reported for medicare in some Nigerian cities.

MATERIALS AND METHODS

Genital specimens (n=585) made up of high vaginal swabs (83%) endocervical swabs (14%) and urine (2.9%) were collected from symptomatic female genitourinary candidiasis patients reporting to hospitals and medical diagnostic laboratories in seven Nigerian cities. The cities (Abeokuta, Benin, Lagos, Okene, Onitsha, Port-Harcourt and Warri) are located between latitude 5-7.5°N and longitude 3.5-7°E. Each specimen was grown on Sabouraud Glucose Agar (SIFIN, Berlin) culture medium at 37°C for 48 hours. Each culture was examined under the X40 power of an optical microscope and *Candida* was identified by its usual spherical-oval cells with terminal, subterminal or multipolar budding (13). Further identification was done by the CHROM Agar method (14).

RESULTS AND DISCUSSION

The percentage of married *Candida*-positive patients was 55.1 while in the unmarried, it was 44.9 (Table 1). In his study Sehgal (5) had earlier reported 61% incidence of urethritis in the married as against 39% in the unmarried women. Also, the married accounted for 70% of the Human Immunodeficiency Virus (HIV) infection cases in Nigeria as reported by FMOH (4). The last two reports together with our results of this investigation (Table 1) suggest that the married women probably engage in illicit

Table 1: Marital distribution of genitourinary candidiasis in different age groups in 585 subjects.

Age group (Years)	Marital distribution (%)		
	Married	Unmarried	Total
15 - 20	1.1	10.3	11.4
21 - 25	12.3	8.5	21.1
26 - 30	25.8	6.9	32.7
31 - 35	11.9	5.7	17.6
36 - 40	3.2	5.3	8.5
41 plus	0.8	7.9	8.7
Total	55.1	44.9	100

Table 2: Marital distribution of genitourinary candidiasis among 585 subjects in different cities.

City	Percentage in total subjects		
	Married	Unmarried	Total
Abeokuta	7.0	4.4	11.4
Benin	12.5	10.3	22.8
Lagos	10.3	8.9	19.2
Okene	2.0	1.6	3.6
Onitsha	2.8	2.5	5.3
Port Harcourt	9.5	7.1	16.6
Warri	11.0	10.1	21.1
Total	55.1	44.9	100

sexual relationships since sexual infidelity has been identified as a factor that promotes and spreads sexually transmitted infections. It could also be due to sexual activity in those women bearing children. This is evident in Table 1 which shows that the married in the age group 26-30 years had the highest occurrence (25.8%) followed by married women of 21-25 years (12.3 %). People in these age groups are mainly youths (who may be involved in sexual promiscuity and drug abuse) and women who are bearing children (7,15).

The report of Sehgal (5) showed the age group 21-30 years to have the highest incidence of genitourinary candidiasis while Ako-Nai *et al.* (16) showed the 20-25 years age group as the group with the highest incidence. Also, UNAID (8) reported that the highest incidence was in people less than 25 years old while Okungbowa *et al.* (17) reported that the highest incidence was in the age group 26-30 years. It could be concluded therefore, that the age group 20-30 years is the most affected. The high incidence in the unmarried aged 41 plus could be due to use of contraceptive. Although the occurrences in the married group were higher than in the unmarried in the seven cities, there were, however, no significant differences between values for the married and those for the unmarried (Table 2).

Thus, marital factor appears to play a major role in the incidence of genitourinary candidiasis especially in the most vulnerable age group.

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