

PATTERN OF GENITAL CANDIDIASIS AT UNIVERSITY OF NIGERIA TEACHING HOSPITAL OVER A FIVE-YEAR PERIOD JANUARY 1980-DECEMBER 1984

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The prevalence of genital candidiasis at the University of Nigeria Teaching Hospital (UNTH) in Nigeria was examined for five-years period (January 1980-December 1984). The highest incidence was found among the under-10-year-old, followed by 20-29-year-old, the sexually active group. The overall incidence at UNTH was found to be relatively low.

Key words : Candidiasis, Genital, Incidence.

Yeast infections of the genital tract, usually caused by *Candida albicans*, are increasing in frequency. They are found more frequently in females, causing vaginal discharge, dysuria, pruritus, vulvitis and dysmenorrhoea. Males may develop balano-posthitis or occasional urethritis, but often are symptomless. Genital infection usually is sexually transmitted but may also spread from the intestine. Candidiasis is favoured in pregnancy by the high acidity of the vagina which tends to destroy other bacteria,¹ and by the increased glycogen content of the vagina and also by the increased frequency of glycosuria.² Hence the infection is common in diabetes and pregnancy. The incidence is as high as 71.4% in the antenatal patients in Woolwich, London, England.³ In Ibadan, Nigeria the figure is put at about 33.2%,⁴ and 12% in symptomless women,⁵ and 16.6% in intrauterine contraceptive device acceptors.⁶ In a study in STD referral clinic in Lagos, Rotimi and Somorin⁷ examined 276 patients and found that 10.5% had the disease. Enugu is the capital of the Anambra state of Nigeria and is located in the grassland belt, about 400 kilometres from the Atlantic Ocean. Information on genital candidiasis from this part of the

country appears to be lacking in the literature. The present analysis was done to establish the pattern of candidiasis at the University of Nigeria Teaching Hospital (UNTH), for the five-year period (January 1980-December 1984) for which accurate record was kept.

Materials and Methods

Urine samples, urethral or endocervical swabs were collected from patients presenting with any of the following symptoms: urethral discharge, dysuria, pruritus, urgency and frequency, lump in the groin or vagina. Excluded from the analysis were pregnant women, on contraceptive pills, diabetes and patients on immunosuppressive drugs.

Wet preparations of the specimens were directly examined microscopically for *Candida*. From January to December 1980, 11,129 specimens were examined, while for 1981, 1982, 1983 and 1984 the number of samples examined were 7987, 6378, 6088 and 7781 respectively.

Results

The age group, sex distribution and percent prevalence of positive cases of genital candidiasis at UNTH are shown in table I. Of the 11,129 samples (urine and urethral or endocervical smear) examined in 1980, *Candida* was found in specimens from 201 males (1.8%) and 253 females (2.3%). Of the 7987 specimens examined in 1981, this fungus was seen in samples from 90 males (1.13%) and 115 females

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Table I. Age and sex distribution and prevalence (%) of positive cases of genital candidiasis at the UNTH January 1980—December, 1984.

Age Groups	1980 11,129 specimens examined		1981 7987 specimens examined		1982 6378 specimens examined		1983 6088 specimens examined		1984 7781 specimens examined	
	Males	Females	Males	Females	Males	Females	Males	Females	Males	Females
0—10	97	72	46	23	16	8	14	6	16	12
11—19	20	23	7	18	3	8	3	5	4	7
20—29	41	74	20	37	8	14	5	12	7	18
30—39	18	33	4	10	1	3	2	4	3	5
40—49	9	30	6	16	1	2	1	2	2	3
50 & over	16	21	7	11	2	2	2	4	1	2
Total :	201	253	90	115	31	37	27	33	33	47
%Prevalence	(1.8%)	(2.3%)	(1.13%)	(1.44%)	(0.5%)	(0.58%)	(0.44%)	(0.54%)	(0.42%)	(0.66%)

(1.44%). In the subsequent years, the number of positive cases recorded were 31 (0.5%) males and 37 (0.58%) females for 1982, 27 (0.44%) males and 33 (0.54%) females for 1983, and 33 (0.42%) males and 47 (0.60%) females for 1984.

The overall infection was higher in females than males. In this study, there was a definite seasonal variation, the highest infection rates having been recorded during the rainy season (Fig. 1). The percent prevalence rate for both sexes were, 4.1%, 2.57%, 1.08%, 0.98% and 1.02% for 1980, 1981, 1982, 1983 and 1984.

Unlike previous studies, the highest number of positive cases was seen in children under 10 years of age. This was followed by 20 to 29 year age group and 30-39 age group. In 1980, 169 children (1.5%) under the age of 10 years were found to have *Candida*, while in 1981, 69 children (0.86%) harboured the disease. In the subsequent years 1982, 1983 and 1984, the figures were 24 (0.4%), 20 (0.33%) and 28 (0.36%) respectively.

Comments

It is well-known that candidiasis is common in pregnancy, diabetes mellitus, pernicious anemia and in individuals on antibiotics, contraceptive pills, immunosuppressive drugs and trichomonacide therapy.^{8,9} *Candida albicans*

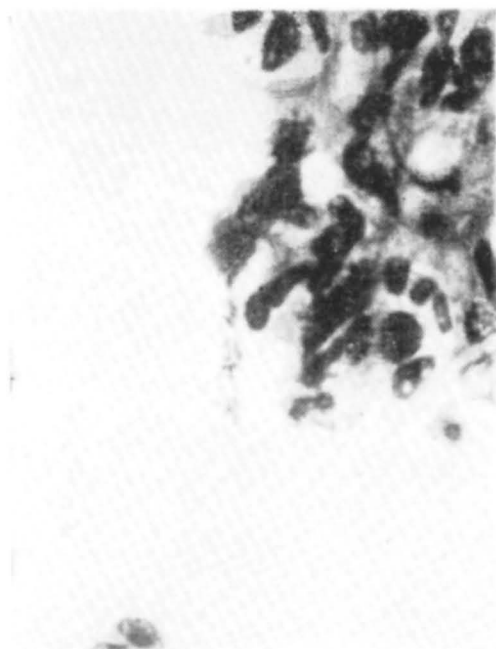


Fig. 1. Seasonal variation of genital candidiasis, the highest rate was recorded during the rainy season (May-September).

can frequently be isolated from the oral, anorectal and vaginal flora in healthy women. Hurley and Morris¹⁰ pointed out that only seven of the thirty species of *Candida* are pathogenic to man.

The prevalence of candidiasis at UNTH did not appear to be high taking into account

the large number of specimens analysed. The highest incidence of the infection among the under 10 year group is in complete disagreement with the findings for other sexually transmitted diseases such as trichomoniasis and gonococcal infections.^{7,11,12}

The high rate of positive genital candidiasis among children under 10 years indicates importance of candidiasis as a public health hazard in Enugu. Several factors have been suggested for the apparent high prevalence of childhood candidial infection in Enugu. First ly *Candida albicans* is able to survive longer outside the body in the presence of high relative humidity (up to 85%) during the rainy season (May-Sept.) in Enugu, and thus allowing clothes and other fomites contaminated with the fungus to remain infective for a longer time. Secondly, the overcrowded dwellings of most Nigerians facilitate infection. Several drugs are effective against candidiasis and in Nigeria, all drugs can be purchased over the counter without a proper prescription. The problem of self-medication is rampant.

The dramatic fall in the number of samples examined in 1980 and 1981 is attributable to the establishment of primary health care programmes in the state.

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