

A STUDY OF HIGH VAGINAL SWABS IN KANO TEACHING HOSPITAL - A PRELIMINARY REPORT.

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KEY WORDS: Candidiasis, Candida albicans, Germ tube.

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ABSTRACTS

AIMS: To establish a baseline data of vaginal discharges in Kano and to compare clinical and laboratory diagnosis of abnormal vaginal discharges in Kano

METHODS: Standard Microscopical, cultural and biochemical procedures were used following a provisional clinical diagnosis. Standard strains were used as negative and positive controls

RESULTS: *Candida albicans* were found in 86 specimens as well as one non fully speciated *Candida* species. A few mixed infections with both *Candida albicans* and *Trichomonas vaginalis*. *Staphylococcus aureus* was found in a known case of puerperal sepsis. No single obvious case of Bacterial Vaginosis

CONCLUSION: The high frequency of germ tube confirmed *Candida albicans* in 52.5% of our patients should be a major source of concern. Salient salpingitis due to *Chlamydia trachomatis* and *Neisseria gonorrhoeae* require further investigation. Clinical and laboratory diagnosis show no major discrepancies in Kano.

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INTRODUCTION.

Vaginal discharge is a common gynaecologic disorder characterized by a distressing, often whitish, non-bloody discharge from the female genital tract. When due to inflammation, it is referred to as vaginitis¹. Abnormal vaginal discharge is a symptom of some disorder in the genital tract or elsewhere in the body. It is a common complaint among women of different age groups in any society whether or not they are sexually active. Apart from infectious agents, chemical irritants such as antiseptics in bathing water, physical agents such as tampons and foreign bodies, and poor genital hygiene may cause abnormal vaginal discharge¹. The relative frequency of candidal vaginitis, trichomoniasis and bacterial vaginosis (BV), vary markedly in different populations. Vaginitis resulting from bacterial vaginosis (BV), fungal (Candidal) or protozoal infections can be associated with altered vaginal discharge, odour, pruritus, irritation, dysuria, or dyspareunia depending on the type of infection². Available literature confirms that

only a small population of cases seek sexually transmitted diseases (STDs) treatment from the formal health sector and, in many developing countries, the majority of people seek help from traditional healers, street vendors, pharmacists and other quacks³. The cure of STDs depends on correct early diagnosis and treatment, good preventive and control measures⁴. Researchers elsewhere have found that only 29-40% of clinical diagnosis is confirmed (correct). Further more other studies have found that;

1. Microbes are the most likely potential aetiologies of a woman's complaint of vaginal discharge .
2. The implication of bacterial vaginosis as a risk factor for pelvic inflammatory diseases (PID).
3. BV and trichomoniasis as cause of preventable preterm delivery^{5,6}.
4. The 3 microbes (*Candida albicans*, *Gardnerella vaginalis* and *Trichomonas vaginalis*) are possible risk factors for acquisition of HIV/AIDS as well as other complications^{6,7}.

The study of the microbiological profile of vaginal discharges in Kano in this preliminary report seeks to establish a baseline data on the microbiology of High Vaginal Swab (HVS) here. Being a new centre, the standard microbiological procedures are just being established to help it compare favourably with other tertiary hospitals. The focus of this research is on correct and early diagnosis of abnormal vaginal discharges in Kano, a highly populated city in North Western Nigeria.

MATERIALS AND METHOD

The study population included the 160 consecutive HVS collected at the family planning clinic from female patients attending different clinics at AKTH and sent to the urogenital bench for analysis. This excluded those with infertility, and complications of septic abortions. Standard procedures were used in the collection of the HVS, transportation and processing of samples. Microscopy, culture and biochemical tests were done according to recommended standard tests⁸. Standard Strains were used as positive and Negative controls. The duration of the study was six months.

RESULTS:

The following results were obtained .

Table I shows the distribution of HVS results by age groups. Most HVS specimens and isolates came from the sexually active age groups, 76 and 42 from 21 to 30yrs, 40 and 23 from 21-30yrs and, 32 and 13 from 31-40yrs respectively

Table II shows the distribution of HVS samples and results according to clinics and wards in the hospital. GOPD had the highest with 76 samples and 48 isolates followed by Gynae clinic, A/E clinic, ANC clinic etc with 29 samples and 17 isolates 16 and 3, 14 and 6 in that order respectively.

Table III shows the types of microorganisms (microbes) detected on microscopy and culture. *Candida albican* was isolated most of the time and constituted 97.71% or 84 isolates while others were candida species I, *Trichanonas vaginalis* 1 and *Staphylococcus aureus* 1 .

TABLE I- THIS SHOWS THE DISTRIBUTION OF HVS RESULTS ACCORDING TO AGE - RANGE.

AGE GROUP IN YRS.	NO. OF HVS SPECIMENS	NUMBER OF ISOLATED	(%).
0-10	7	5	3.13
11-20	40	23	14.38
21-30	76	42	26.25
31-40	32	13	8.13
41-50	5	3	1.88
TOTAL	160	86	53.75%

TABLE II: THIS SHOWS TE DISTRIBUTION OF HVS RESULTS ACCORDING TO CLINICS AND WARDS.

CLINICS/WARDS	NUMBER OF HVS	%	NUMBER OF ISOLATES	%
GOPD	76	47.5	48	30
GYNAE CLINIC	29	18.12	17	10.62
A/E(Accident & Emergency)	16	10	3	1.87
ANC(Antenatal care)	14	8.75	6	3.75
PNW(Perinatal)	14	8.75	9	5.62
<u>LABOUR</u>	11	6.87	3	1.87
TOTAL	160	100%	86	53.75%

TABLE III: SHOWS THE DISTRIBUTION OF MICROORGANISMS BASED ON MICROSCOPY AND CULTURE

NUMBER OF HVS SPECIMENS	TYPES OF MICROBES	NUMBER OF MICROBES	%
160	Candida albicans	84	52.5
	Candida Species	1	0.63
	Staphilococcus aureus	1	0.63
	Trichomonas vaginalis	1	0.63
	No Pathogen Isolated	74	46.25
160		86 and T.V.	53.75

DISCUSSION AND CONCLUSION

Based on our results, 86 isolates were gotten constituting (53.8%) out of the 160 specimens collected using microscopy (wet prep, stained smears), culture and biochemical tests. Out of the 86 isolates obtained, 84 were candida albicans while one was a candida species and the remaining was *Staphilococcus aureus* from a woman with known puerperal sepsis. A client had both *C. albicans* and *Trichomonas vaginalis*. Our results show higher number of isolates (53.8%) as compared with that of other workers 30% & 22% by Geraldo p. et al⁹ in New York and 21% by Egah.D.et al¹⁰ in Jos, Nigeria. *Candida albicans* is the most common agent of

vaginitis among our patients in Kano constituting 97.7% (84), 13 (8.1%) had no growth while 61 (38.1%) had mixed insignificant growth and were classified as no pathogen isolated. It was observed that most patients as well as most positive samples were from age groups 21-30 years of age. These were followed by those in age brackets 11-29 and 31-40 respectively. Obviously, this is the sexually active age group i.e. 15 – 40 years where STDs including HIV/AIDS and vulvo vaginitis are common. Most patients were from GOPD which is like a screening centre for the hospital. Obviously GOPD and A/E constituted 57.5% of the cases while the rest were from obstetrics and gynaecology. The sensitivity of the wet mount, grams stained smears, culture and other biochemical tests in the detection of *Candida albicans* cannot be over emphasized. Over 50% were positive using these methods. Since some *Candida albicans* are now resistant to clotrimazole and other topical treatments, the need for a review of all cases by experts is now pertinent. Moreover, since all STDs including candidiasis increase transmissibility of HIV/AIDS, there is need for adequate, accurate and prompt diagnosis and treatment of all cases. As previously observed in one case, the coexistence of candidiasis with *Trichomoniasis* and or PID is always a possibility. The rarity of *Trichomonas vaginalis*(TV) and *Gardnerella vaginalis* (GV) in HVS is definitely puzzling since other workers have found up to 20% or more. Further research is encouraged to find why. In conclusion: It is our view that the high frequency of confirmed germ tube positive *Candida albicans* should constitute a major source of concern in this era of HIV/AIDS. It is possible that some of these women may harbour silent salpingitis due to *chlamydia*, *Neisseria gonorrhoeae*. Further research in this line is recommended.

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