



PREVALENCE OF MICROBIOTA ASSOCIATED TO VAGINAL DISCHARGE AMONG REPRODUCTIVE AGE GROUP BASED ON SOCIO-ECONOMIC STATUS AND DEMOGRAPHIC BACKGROUND

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ABSTRACT In women of reproductive age, vaginal discharge is one of the most frequent signs. Vaginal discharge may be physiological or pathological; thus, this study was conducted to ascertain the microbial diversity of vaginal discharge cases in relation to socioeconomic status and demographic history among women of reproductive age attending a tertiary care hospital. To diagnose the organism, simple wet laboratory preparation, 10% KOH, Gram staining, and pH paper were used, while to classify and categorise the pathogens, various differential agar media such as CHROM agar, Blood agar, and Sabouraud Dextrose agar were used, followed by some biochemical tests and the use of the Nugent Score. The majority of the patients were between the ages of 22 and 28. The patients were all from the lower middle class 41. (37.61 percent). Microbial diagnosis revealed that 45 percent of patients had Bacterial Vaginosis, 41 percent had Candidiasis, 5% had Trichomoniasis, and 9% had both Bacterial Vaginosis and Candidiasis..

KEYWORDS : vaginal discharge, reproductive age, socio economic and demographic profile

INTRODUCTION

Vaginal discharge is one of the most frequent symptoms in women of reproductive age. [1] Vaginal discharge may be either natural or pathological in nature. It is important to treat pathological discharge. Cervicitis or vaginitis may also cause vaginal discharge. Trichomonas vaginalis, Gardnerella vaginalis, and Candida albicans are the bacteria that cause vaginitis.[2] Bacterial Vaginosis and Candidiasis, all of which are caused by a disruption in the vaginal bacterial flora. [3] The majority of women suffer in silence, unable to accept advice or medication. [4] That has established syndromic management protocols for the treatment of sexually transmitted infections in a developing world.[5] Vaginal discharge may be clear, cloudy, or white, and it's typically non-irritating and odourless. The volume and colour of regular discharge will change for a variety of causes, and it may be a symptom of a vaginal infection. Trichomonal vaginitis, Candidal vaginitis, and Bacterial vaginosis are the three primary forms of vaginal infections currently known. Gardnerella vaginalis is related to bacterial vaginosis, Trichomonas vaginalis causes vaginal vaginitis, and Candida species causes candidal vaginitis. [6]As a result, this research was undertaken to evaluate the microbial diversity of vaginal discharge cases in relation to social status and demographic history among women of reproductive age attending a tertiary care hospital.

MATERIAL AND METHODS

Descriptive cross-sectional study was conducted the study was conducted over a period of 6 months in Gynecology & Obstetrics Department of Sharda Hospital, Greater Noida, UP, India. Patients in reproductive age group (15-49 years) attending Gynaecology and Obstetrics Outpatient/ In-Patient Department, with signs and symptoms of vaginitis or vaginal infections were included. Patients who gave consent for the study. Exclusion Criteria- All Out going patients and those taking antibiotics.

First swab was used for wet preparation, second swab for gram staining. And third swab was used for culture. Laboratory diagnosis: Wet preparation A suspension of vaginal exudate was made on a glass slide using a few drops of isotonic saline and covered with a cover slip. This was examined under high power (40x) lens of microscope. The following features were observed- Clue cells Budding yeast cells and pseudohyphae Motile trophozoites of Trichomonas vaginalis. KOH preparation (10%) was done to for hyphae. pH paper was used to check pH due bacterial vaginosis. Vaginal smear was heat fixed and was stained by Gram's method to observe Budding yeast cells or pseudohyphae. Smear was examined for bacteria of various morphotypes and scored as per Nugent's criteria. CHROM agar was used for species identification. Suger fermentation test was done using by Andrade's indicator with invert durham's tube to see gas production. Culture of high vaginal swabs- High vaginal swab were cultured in Blood agar for isolation of bacteria and Sabouraud Dextrose agar for isolation of fungi.

The data obtained was presented in bar graph and table .

RESULT AND OBSERVATION

Table 1. Demographic distribution of patient based on vaginal discharge

Particulars	Frequency (n=120)	Percentage (%)
AGE		
15-21	18	15
22-28	37	31
29-35	22	18
36-42	16	13
43-49	27	23
Total	120	100
MARITAL STATUS		
MARRIED	73	61
UNMARRIED	47	39
Total	120	100
RELIGION		
HINDU	79	66
MUSLIM	41	34
Total	120	100
EDUCATION		
Post-secondary	24	20
Secondary	22	18
Primary	56	47
None	18	15
Total	120	100

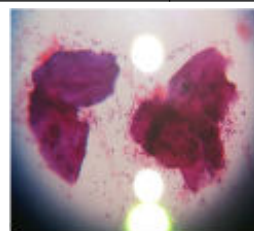


Image 1. Clue cells

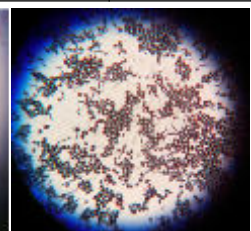


Image 2. Candida and lactobacilli

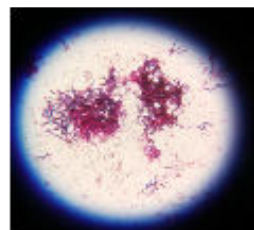


Image 3. lactobacilli

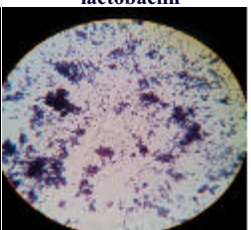
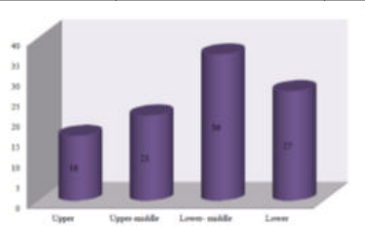
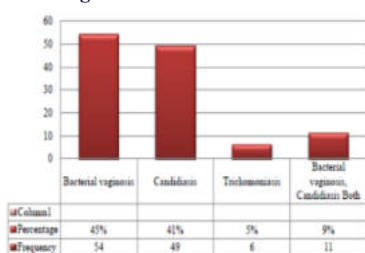


Image 4. Gardnerella vaginalis

Fig.1 Microscopic Observation of various cells

Table 2. Distribution of vaginal discharge in participants

Symptom of Discharge	Frequency (120)	Percentage (%)
color		
Whitish	57	47.5
Curdy	54	45
Greenish frothy	9	7.5
Total	120	100
Odour		
Odourless	56	46
Stinky	64	54
Total	120	100

**Fig 2. vaginal discharge based on Socio-economic distribution****Fig 3. Prevalence of vaginal microbiota found in vaginal discharge**

DISCUSSION

Vaginal discharge is a common health issue for women of reproductive age, whether asymptomatic or symptomatic; however, it is frequently missed by women, making clinical diagnosis more difficult. Swabs were screened for causative pathogens using normal microbiological procedures (Yeast, bacteria, *Trichomonas vaginalis*). The findings of this analysis revealed that possible pathogenic agents were isolated in all cases of vaginal discharge seen in the Gynecology OPD. [7]

Vaginal discharge was found to be more common among females aged 28 (55 percent), married (61 percent), and housewives in our sample (46 percent). Patel V et al (2005), on the other hand, observed a higher proportion of vaginal discharge in the younger age group, single females, and those who work. [8] This may be because unmarried and younger females with vaginal discharge reported to the hospital less often, and because our research was limited to hospitals, their numbers were lower. According to Patel V et al. (2005), illiterates, Muslims, and women of low socioeconomic status have a higher incidence of vaginal discharge. This was in line with our findings. [8] In our sample, 62 percent of those who identified with vaginal discharge were illiterates, with the majority belonging to low socioeconomic status.

This may be attributed to a lack of personal and menstrual hygiene, and may be a contributing factor of vaginal discharge.

CONCLUSION

The study found that young women between the ages of 22 and 28, who were in their reproductive years and came from lower socioeconomic middle-class families, had more regular vaginal discharge. Bacterial vaginosis and Candidiasis became more common, with Trichomoniasis and the mixed disease of the former becoming less common.

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