

“PREVALENCE OF BACTERIAL VAGINOSIS: A Cross-Sectional Study at a JNU IMSRC Medical College and Research Centre Jaipur”

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ABSTRACT

Introduction- In India the most frequent cause of vaginitis in women in the reproductive age range is bacterial vaginosis (BV). In bacterial vaginosis anaerobes and Gardnerella vaginalis replaces the lactobacillus which is the most common species in a healthy, normal vaginal flora.

Aim -To study the prevalence of bacterial vaginosis in patients with white discharge at Gynaecology OPD.

Material and Methods- This Study was conducted in the department of Obstetrics and Gynaecology of JNU Medical College and Hospital Jaipur from January 2022 till April 2024. A total of 200 consecutive women with symptoms of vaginitis or excessive vaginal discharge were enrolled for this study.

Results- Prevalence of BV was 28%. Most common affected age group was between 20-29 years. Routinely a combination of various methods are used for the diagnosis of bacterial vaginosis (BV), although Nugent criterion is considered as the gold standard method.

Conclusion: The high prevalence of BV in India may necessitate adequate screening of pregnant women with abnormal vaginal discharge in order to give appropriate treatment and avoid complications associated with it.

Keywords: bacterial vaginosis, lactobacillus, Nugent criterion.

INTRODUCTION:

The most common cause of vaginitis in women of reproductive age group is Bacterial vaginosis (BV) [1]. In India the prevalence of Bacterial vaginosis in adult population ranges from 17.8% to 63.7% [2].

Although the typical vaginal flora differs from person to person, lactobacilli are typically the predominant organism. There are other aerobic and anaerobic species in the bacterial flora. A polymicrobial synergistic illness, bacterial vaginal vaginosis (BV) is typified by intricate alterations in the typical vaginal flora, which are described to a decrease in Lactobacilli prevalence and a rise in the concentration of pathogenic organisms. [3]

Various studies have shown that bacterial vaginosis is associated with pelvic inflammatory disease, preterm premature rupture of the membranes, recurrent abortion, post-operative infections [4,5].

BV is frequently seen in low settings but remains underdiagnosed [6]. Amongst pregnant teenagers there should be routine screening for the agents of bacterial vaginosis, in particular mycoplasma hominis. The prevalence of BV is high in pregnant women so routine screening of all pregnant women, by cervico-vaginal smears is desirable. The presence of anaerobes (bacteroides species) and increase in the numbers of Escherischia coli, streptococcus faecalis, and Klebsiella aerogenes are associated with septic abortion [7].

The most commonly used methods for the diagnosis of bacterial vaginosis includes Amsels composite criteria and Nugents grams stain evaluation of bacterial morphotypes. [8,9].

Aim and Objective-To study the prevalence of bacterial vaginosis in patients with white discharge at Gynecology OPD.

Material and Methods

This Study was conducted in the department of Obstetrics and Gynaecology of JNU Medical College and Hospital Jaipur from January 2022 till April 2024. A total of 200 consecutive women with symptoms of vaginitis or excessive vaginal discharge were enrolled for this study.

INCLUSION CRITERIA:

1. Those who have given consent for participation in the study.
2. All women of reproductive age group 20-50 years of age with complains of white discharge per vagina.

EXCLUSION CRITERIA

1. Patients on treatment with antibiotics in any form local and systemic.
2. Patients who are pregnant.
3. Patients with bleeding per vagina.
4. Those who had taken antibiotics within the previous four weeks.

Results:**Table 1: Age distribution of study subjects**

Age group (years)	N	Percentage
20-29 years	99	49.5
30-39 years	71	35.5
≥40 years	30	15
Total	200	100
Mean ± SD	30.68 ± 7.71 years	
Median (Range)	29 (17 – 65 years)	

Out of 200 patients 99 belonged to 20-29 years, 71 belonged to 30-39 years and 30 belonged to ≥40 years

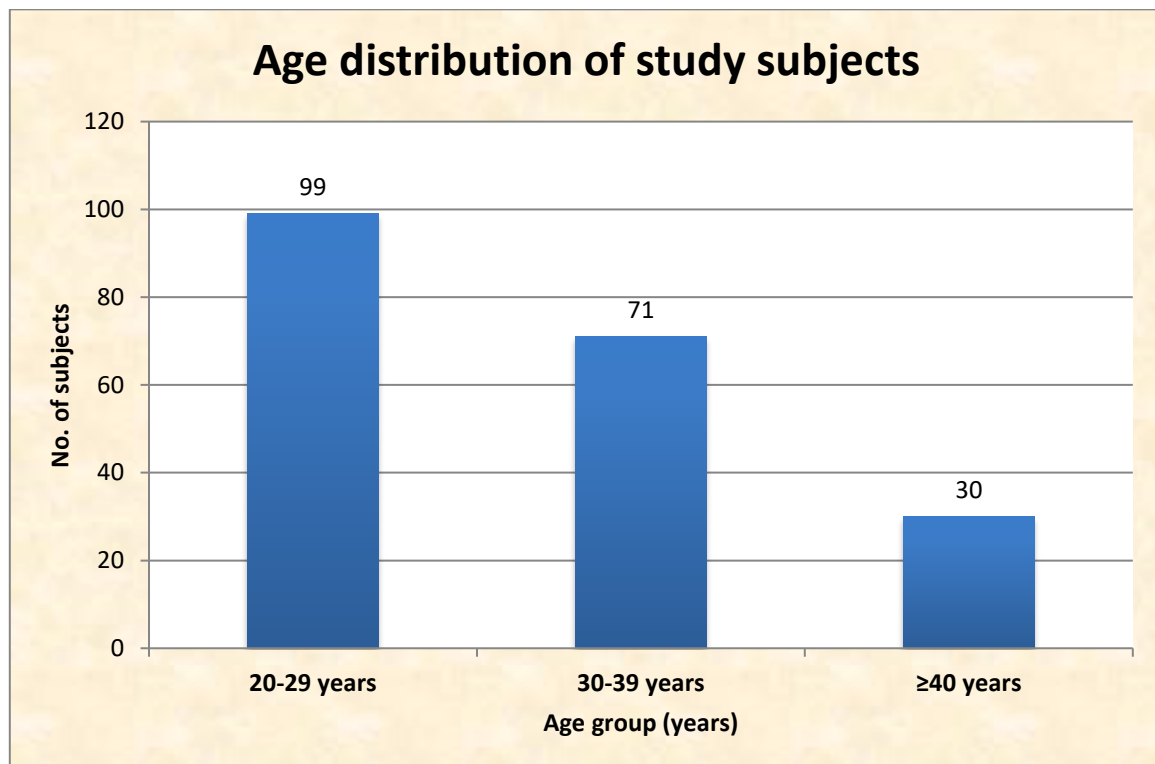


Table 2: Socio demographic profile of study subjects

		N	Percentage
Education	Graduate and above	44	22
	Illiterate	32	16
	Secondary	56	28
	Senior Secondary	68	34
Occupation	Semi Skilled	136	68
	Skilled	64	32
Residence	Urban	80	40
	Rural	120	60

Out of 200 patients 44 have degree of Graduation and above, 68 have degree of Senior Secondary, 56 have degree of Secondary, and 32 are illiterate. Out of 200 patients 136 are semi-skilled and 64 are skilled. Out of 200 patients 80 belonged to urban background and 120 belonged to rural background

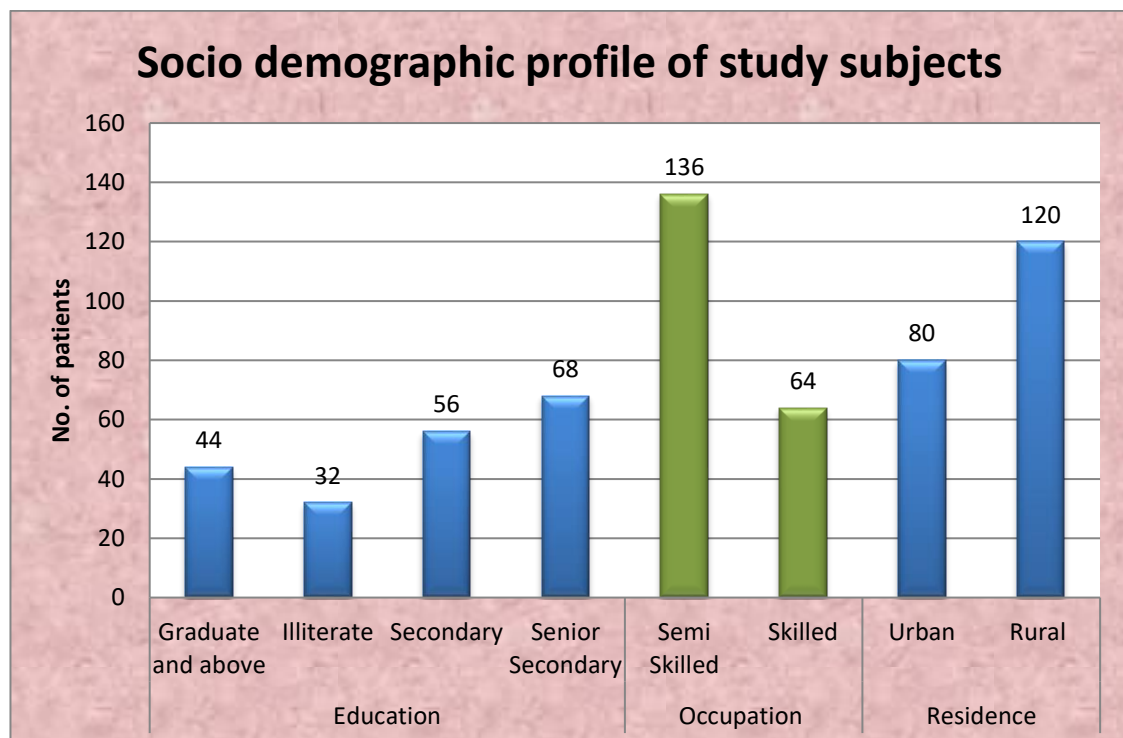


Table 3: Distribution of study subjects according to personal habits

		N	Percentage
Tobacco Chewing	Habitual	40	20
	Never	115	57.5
	Occasional	45	22.5
Smoking	No	154	77
	Yes	46	23
Alcohol	No	200	100
	Yes	0	0
Diet	Mixed	70	35
	Vegetarian	130	65

Out of 200 patients 40 are habitual tobacco chewer, 115 are non-tobacco users and 45 are occasional tobacco chewers. Out of 200 patients 46 are smokers and 154 are non-smokers. All 200 patients are non-alcoholics. Out of 200 patients 130 are Vegetarian and 70 are mixed diet users.

Table 5: Distribution of study subjects according to Nugent's score interpretation

	N	Percentage
Normal	112	56
Intermediate	32	16
Bacterial vaginosis	56	28
Total	200	100

Out of 200 patents number of patients in Normal ,Intermediate and Bacterial vaginosis category are 112, 32, and 56 respectively

Distribution of study subjects according to nugent's score interpretation

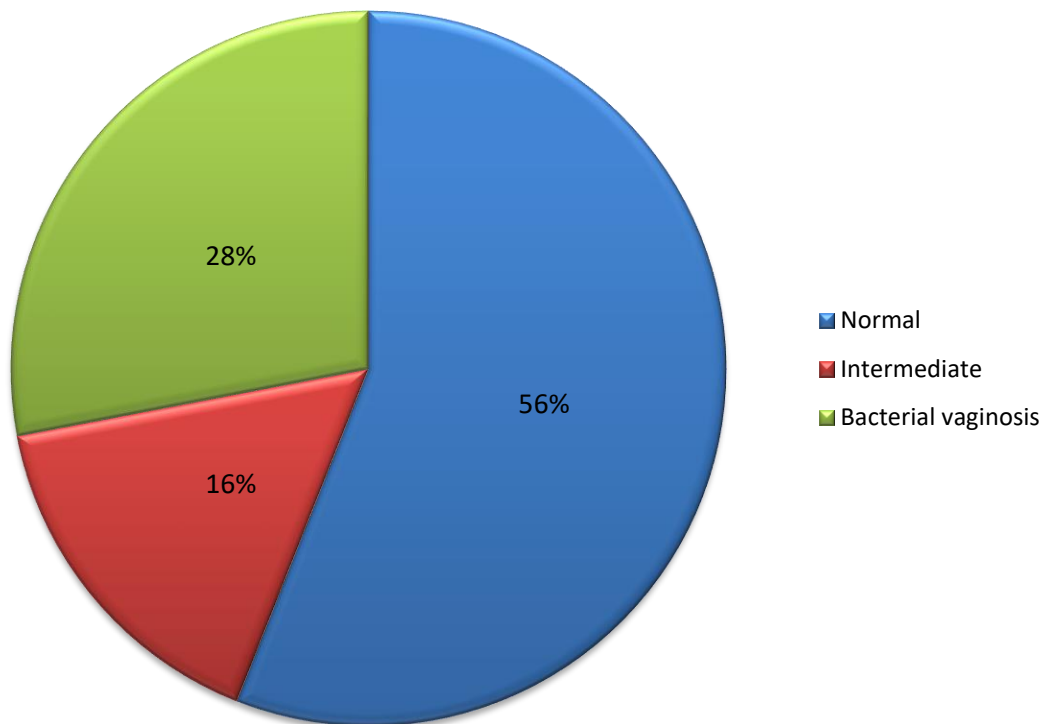
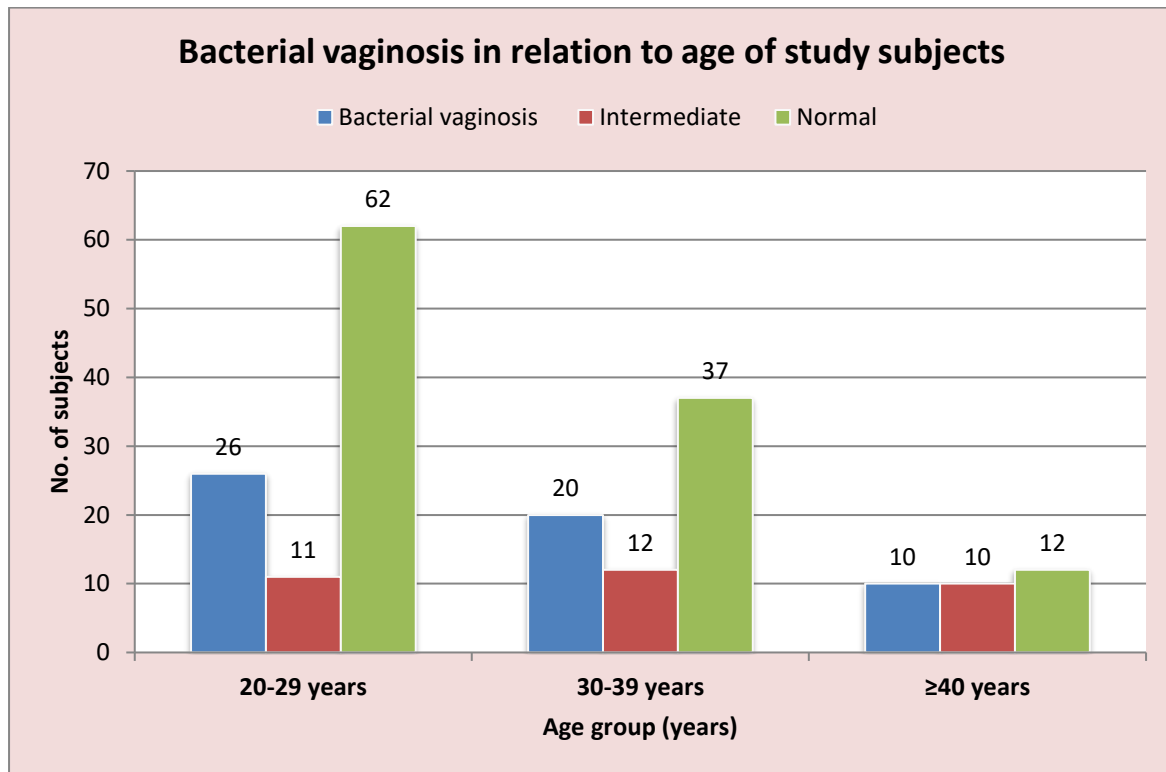


Table 6: Bacterial vaginosis in relation to age of study subjects

Age group (years)	Bacterial vaginosis		Intermediate		Normal		Total
	N	%	N	%	N	%	
20-29 years	26	26.3	11	11.1	62	62.6	99
30-39 years	20	28.7	12	15.2	37	56.1	66
≥40 years	10	33.3	10	33.3	12	40.0	30
Total	56	28.0	32	16.0	112	56.0	200
Chi-square = 9.064 with 4 degrees of freedom; P = 0.060							

The number of patients in Bacterial vaginosis, Intermediate, and Normal category are 26, 11, and 62 respectively in age group of 20-29 years. The number of patients in Bacterial vaginosis, Intermediate, and Normal category are 20, 12, and 37 respectively in age group of 30-39 years. The number of patients in Bacterial vaginosis, Intermediate, and Normal category are 10, 32, and 16 respectively in age group of ≥40 years.



DISCUSSION

In the world, BV is a prevalent genital issue among women undergoing gynaecological care. An ecological disturbance of the vaginal microbiota, bacterial vaginosis (BV) affects millions of women each year and is linked to a number of unfavourable health outcomes, such as preterm birth and the development of STDs.

In the current study, we assessed the prevalence of BV in the community and compared the various BV diagnostic techniques, using the Nugent score as the gold standard for evaluation. In present study prevalence of bacterial vaginosis was 28%. Bhalla P et al [10] in their study in Delhi found that prevalence of BV was 32.8 % among symptomatic patients which is similar to our results. Similarly, Eliza Ranjit et al [11] in their study in Nepal found that prevalence of BV was 24.4% among symptomatic patients which is similar to our results.

However, Farheen A et al [12] in their study on 360 consecutive women at KBN medical college and hospital, Gulbarga, Karnataka found that prevalence of BV was 44.16% which is higher than prevalence of present study. Akshita S R et al [13] in their study found that the bacterial vaginosis prevalence in women in the reproductive age group was 44.8% which is higher than prevalence of present study.

CONCLUSION

In nutshell the present study concludes that the high prevalence of BV in India may necessitate adequate screening of reproductive age group females with abnormal vaginal discharge in order to give appropriate treatment and avoid complications associated with it. These findings raise the need for health educational programs through different media to educate women about the difference between normal and abnormal vaginal discharge and when to consult their doctor.

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