

## PREVALENCE OF BACTERIAL VAGINOSIS AT A TERTIARY CARE CENTRE

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### ABSTRACT

**Introduction-** In India, bacterial vaginosis is the most common cause of vaginitis in women of reproductive age. In bacterial vaginosis, anaerobes and Gardnerella vaginalis replace Lactobacillus, the most frequent species in a healthy, normal vaginal flora.

**Aim** -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 SMS Medical College and Hospital Jaipur from January 2024 to January 2025. A total of 100 consecutive women with symptoms of vaginitis or excessive vaginal discharge were enrolled for this study.

**Results-** Prevalence of BV was 30%. Most common affected age group was between 21-30 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:** Given the high prevalence of BV in India, adequate screening of pregnant women with abnormal vaginal discharge may be required in order to provide appropriate treatment and minimize problems.

**Keywords-** bacterial vaginosis, lactobacillus, Nugent criterion.

### Introduction

The most prevalent cause of vaginitis in women of reproductive age is bacterial vaginosis (BV) [1]. In India, the frequency of bacterial vaginosis in adults ranges from 17.8% to 63.7% [2].

Although the average vaginal flora varies from person to person, lactobacilli are usually the most prevalent bacteria. There are more aerobic and anaerobic species in the bacterial flora. Bacterial vaginal vaginosis (BV) is a polymicrobial synergistic sickness characterized by complicated changes in the usual vaginal flora, which are attributed to a decrease in Lactobacilli prevalence and an increase in the concentration of harmful organisms. [3]

Several investigations have demonstrated that bacterial vaginosis is related with pelvic inflammatory disease, preterm premature rupture of the membranes, recurrent abortion, and postoperative infections [4,5].

BV is common in low-income areas, yet it is still underdiagnosed [6]. Pregnant teenagers should be routinely screened for bacterial vaginosis agents, particularly *Mycoplasma hominis*. Because BV is common in pregnant women, routine screening with cervico-vaginal smears is recommended. The presence of anaerobes (*bacteroides* species) and an increase in the populations of *Escherichia coli*, *Streptococcus faecalis*, and *Klebsiella aerogenes* are related with septic abortion [7].

Amsels composite criteria and Nugents grams stain examination of bacterial morphotypes are two of the most extensively used procedures for diagnosing bacterial vaginosis [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 SMS Medical College and Hospital Jaipur from January 2024 to January 2025. A total of 100 consecutive women with symptoms of vaginitis or excessive vaginal discharge were enrolled for this study.

## Results-

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

| Age group (years)     | N                  | Percentage |
|-----------------------|--------------------|------------|
| 21-30 years           | 49                 | 49         |
| 31-40 years           | 35                 | 35         |
| ≥41 years             | 16                 | 16         |
| <b>Total</b>          | 100                | 100        |
| <b>Mean ± SD</b>      | 30.68 ± 7.67 years |            |
| <b>Median (Range)</b> | 30 (17 – 64 years) |            |

**Table 2: Socio demographic profile of study subjects**

|                  |                         | N  | Percentage |
|------------------|-------------------------|----|------------|
| <b>Education</b> | <b>Illiterate</b>       | 20 | 20         |
|                  | <b>Secondary</b>        | 24 | 24         |
|                  | <b>Senior Secondary</b> | 26 | 26         |

|                   |                           |    |    |
|-------------------|---------------------------|----|----|
|                   | <b>Graduate and above</b> | 30 | 30 |
| <b>Occupation</b> | <b>Semi Skilled</b>       | 67 | 67 |
|                   | <b>Skilled</b>            | 33 | 33 |
| <b>Residence</b>  | <b>Urban</b>              | 34 | 34 |
|                   | <b>Rural</b>              | 66 | 66 |

**Table 4: Distribution of study subjects according to Nugent's score interpretation**

|                            | <b>N</b> | <b>Percentage</b> |
|----------------------------|----------|-------------------|
| <b>Normal</b>              | 54       | 54                |
| <b>Intermediate</b>        | 16       | 16                |
| <b>Bacterial vaginosis</b> | 30       | 30                |
| <b>Total</b>               | 100      | 100               |

**Table 5: Bacterial vaginosis in relation to age of study subjects**

| <b>Age group (years)</b>                                | <b>Bacterial vaginosis</b> |          | <b>Intermediate</b> |          | <b>Normal</b> |          | <b>Total</b> |
|---------------------------------------------------------|----------------------------|----------|---------------------|----------|---------------|----------|--------------|
|                                                         | <b>N</b>                   | <b>%</b> | <b>N</b>            | <b>%</b> | <b>N</b>      | <b>%</b> |              |
| <b>21-30 years</b>                                      | 12                         | 25.5     | 5                   | 10.6     | 30            | 63.8     | 47           |
| <b>31-40 years</b>                                      | 8                          | 26.7     | 6                   | 20       | 16            | 53.3     | 30           |
| <b>≥41 years</b>                                        | 10                         | 43.5     | 5                   | 21.7     | 8             | 34.8     | 23           |
| <b>Total</b>                                            | 30                         | 30.0     | 16                  | 16.0     | 54            | 54.0     | 100          |
| Chi-square = 9.064 with 4 degrees of freedom; P = 0.065 |                            |          |                     |          |               |          |              |

## Discussion

In the world, BV is a prevalent genital issue among women undergoing gynecological care. Bacterial vaginosis (BV), an ecological disturbance of the vaginal microbiota, affects millions of women each year and has been related to a variety of negative health effects, including preterm birth and the development of STDs.

In the current investigation, we determined the prevalence of BV in the population and evaluated several BV diagnostic procedures, with the Nugent score serving as the gold standard

for evaluation. In this study, the prevalence of bacterial vaginosis was 30%. Bhalla P et al [10] in their study in Delhi observed that the prevalence of BV was 32.8% among symptomatic patients, which is similar to our findings.

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

The current study shows that given the high prevalence of BV in India, adequate screening of pregnant women with abnormal vaginal discharge is required in order to provide appropriate therapy and minimize problems. These findings highlight the need for health education initiatives in various media to teach women the distinction between normal and abnormal vaginal discharge, as well as when to visit their doctor.

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