

## Prospective Observational Assessment of the Profile of Pregnant Women Diagnosed with Pathological Vaginal Discharge

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### Abstract

**Aim:** The purpose of this study was to assess the profile of pathological vaginal discharge among pregnant women.

**Methods:** The present study was conducted in the Department of Obstetrics and Gynecology, Anugrah Narayan Magadh Medical College and Hospital, Gaya, Bihar, India. 200 patients included in the study. From April 2019 to February 2022. The study included all pregnant women with vaginal discharge.

**Results:** Out of 200 pregnant women 45 were  $\leq 20$  years of age, 75 were between 21 to 25 years of age, 50 were between 26 to 30 years of age and 30 were between 31 to 35 years of age. Out of 200 pregnant women who developed Vaginal discharge, 120 (60%) were primigravida and 80 (40%) were multigravida. Total of 200 women attending antenatal clinic with vaginal discharge were studied. Out of them 150 were asymptomatic and 50 were symptomatic patient. Out of 200 patients there were 120 from low socioeconomic status risk group, 35 were from anaemia risk group 25 were from urinary tract infection risk group, 10 were from vaginal discharge in previous pregnancy and 10 were from diabetes risk group. Out of 50(25%) symptomatic patients there were 30(60%) Vaginal Candidiasis, 15 (30%) Bacterial Vaginosis and 5 (10%) Trichomoniasis.

**Conclusion:** Pathological vaginal discharge was highly prevalent in younger women of low socioeconomic condition with a history of several morbid conditions during pregnancy. Pathological vaginal discharge strongly associated with threatened preterm, PROM and prematurity. These results stress a need for proper diagnosis and management of vaginal discharge and pregnant women should be educated on good hygiene habits.

**Keywords:** Vaginal Discharge, Pregnancy, bacterial vaginosis, candidiasis

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### Introduction

WHO has defined vaginal discharge syndrome as abnormal vaginal discharge (amount, color, and odor) with or without lower abdominal pain or specific symptoms or specific risk factors. [1]

Abnormal vaginal discharge is predominantly caused by replacement of normal vaginal flora by pathogenic bacteria. It is not a disease for itself but it is a symptom of other diseases as

reproductive tract infections and sexual transmitted diseases, and if it isn't treated well it may lead to severe complications as pelvic inflammatory disease, ectopic pregnancy, congenital anomalies, prognosis of genital tract malignancy, so early detection and treatment of abnormal vaginal discharge decreases the maternal morbidity and mortality. [2]

Almost every fourth woman in Gynecological Outpatient Department has the complaint of vaginal discharge. [3] Many studies included different levels of society reported that the prevalence of abnormal vaginal discharge as 12.1 to 30%. [4] The complaint of vaginal discharge is very common, particularly in South East Asia where about a quarter of all adult women report this complaint. [5] Approximately, ten million office visits each year are attributed to vaginal discharge complaints. [6]

Most of the studies shows that most common infection in pregnancy is *Candida albicans* infection, followed by bacterial vaginosis and *Trichomonas vaginalis* infection. Vaginal discharge commonly related to *Candida* species, bacterial vaginosis or *T. vaginalis*, whereas cervical discharge is mainly caused by infection with *Chlamydia trachomatis* and/or *Neisseria gonorrhoeae*. [7] According to most of studies, the higher incidence rate of *Candida albicans* in pregnant women than in non-pregnant women was attributed to increased estrogen content and glycosuria in the acidic vagina due to the rich glycogen content of the vaginal mucosa. [8] Pathological vaginal discharge poses a great risk of complications in pregnant women, including premature rupture of membranes, abortion, chorioamnionitis, low birth weight, prematurity, and postpartum endometritis. [9] Complications in new born are, low birth weight, prematurity and respiratory

distress. That's why antenatal screening in the form of laboratory testing for vaginal discharge is recommended [10], so early detection of pathological discharge and proper treatment can be done and both mother and fetus can be prevented from complications.

The purpose of this study was to assess the profile of pathological vaginal discharge among pregnant women.

## Methods

The present study was conducted in the Department of Obstetrics and Gynecology, Anugrah Narayan Magadh Medical College and Hospital, Gaya, Bihar, India. 200 patients included in the study. From April 2019 to February 2022. The study included all pregnant women with vaginal discharge..

Patients with vaginal discharge evaluated with the following:

1. Clinical history
2. Blood investigations such as CBC, urine routine, RBS
3. High vaginal swab for culture and sensitivity

The complete clinical check-up and medical history was recorded. High vaginal swabs are collected from the posterior fornix of the vagina of each patient and placed in sterile normal saline for culture (bacterial and fungal).

## Statistical analysis

An analysis was first performed to assess frequencies and consistency of independent variables and the outcome (occurrence of pathological vaginal discharge). Data were entered in a database for labeling and construction of derived variables.

## Results

**Table 1: Age distribution, vaginal discharge distribution and Primigravida & Multigravida distribution**

Age distribution	N
≤20 years	45
21-25	75
26-30	50
31-35	30
Women who developed Vaginal discharge	
Primigravida	120
Multigravida	40
Cases	
Asymptomatic	150
Symptomatic	50

Out of 200 pregnant women 45 were ≤20 years of age, 75 were between 21 to 25 years of age, 50 were between 26 to 30 years of age and 30 were between 31 to 35 years of age. Out of 200 pregnant women who developed Vaginal discharge, 120

(60%) were primigravida and 80 (40%) were multigravida. Total of 200 women attending antenatal clinic with vaginal discharge were studied. Out of them 150 were asymptomatic and 50 were symptomatic patient.

**Table 2: Risk factors for pathological vaginal discharge**

Risk Factors	N
Low socioeconomic	120
Urinary tract infection	25
Anemia	35
Diabetes	10
Vaginal discharge in previous pregnancy	10

Out of 200 patients there were 120 from low socioeconomic status risk group, 35 were from anemia risk group 25 were from urinary tract infection risk group, 10 were from vaginal discharge in previous pregnancy and 10 were from diabetes risk group.

**Table 3: Incidence of vaginitis in symptomatic patient**

Incidence of vaginitis	N
Vaginal Candidiasis	30
Bacterial Vaginosis	15
Trichomoniasis	5

Incidence of vaginitis in symptomatic patients: Out of 50(25%) symptomatic patients there were 30(60%) Vaginal Candidiasis, 15 (30%) Bacterial Vaginosis and 5 (10%) Trichomoniasis.

### Discussion

Vaginal discharge is a very common symptom in primary health care. [11] One woman in 10 will present with vaginal discharge in the course of a year. [12] An

initial symptom of most reproductive tract diseases is abnormal vaginal discharge, which can be physiological or pathological. [13] Patho-logical causes for vaginal discharge are due to genital tract malignancy, fistulae, allergic reactions, atrophic vaginitis (menopausal) and reproductive tract infections. [14] The most common causes of vaginal discharge are physiological causes, bacterial vaginosis, and candidiasis. [15] Pregnant

women commonly develop increased vaginal discharge, which in many instances is not pathological [16], which may lead to pregnancy complications like abortions, premature birth, low birth weight and other morbidities.

In our study higher prevalence of vaginal discharge during pregnancy was seen in women age group between 21-25 years. A number of studies have reported higher prevalence of vaginal discharge symptoms and STDs in younger women. [17] In addition to their greater biological vulnerability, adolescents are more susceptible to engaging in risky behaviors and to acquiring STDs. The main risk factors associated with pathological vaginal discharge were young age, low socioeconomic condition, vaginal discharge in a previous pregnancy, depression, anaemia, threatened premature labor, urinary infection, and hospitalization in the current pregnancy. Hence timely detection of vaginal discharge and early treatment helps to prevent maternal and perinatal morbidity and improves the pregnancy outcome.

In a study conducted by Sanusi Mohammed Ibrahim et al [18] in the University of Maiduguri Teaching Hospital, Nigeria. 800 pregnant women were studied. Vaginal discharge in pregnancy is common, but distinguishing abnormal vaginal discharge from normal leucorrhoea of pregnancy is challenging. Since findings have showed that the trio of vaginal candidiasis, trichomoniasis and bacterial vaginosis are common causes of abnormal vaginal discharge in pregnancy; efforts must be made to exclude these conditions in pregnant patients presenting with vaginal discharge so that appropriate treatment can be instituted timely.

In our study, candidiasis was the most common (60%) cause of the pathological vaginal discharge. A cross-sectional study performed in Western India, which shows that 183(78.54%) women had vaginal discharge during pregnancy and the most

common cause was *C. albicans*. [19] The high incidence of candidiasis in vaginal discharge has been attributed to limited diagnostic process, lack of effective therapy and poor hygiene. In our study, the prevalence of bacterial vaginosis was 30%. While the study done in Antenatal care at Kampala International University Teaching Hospital which revealed a prevalence of 10.1%. [20] The variations in bacterial vaginosis have been linked to sociodemographic traits, reproductive health, sexual practices, and genital hygiene. [21]

The high prevalence observed in our study of infections such as candidiasis, bacterial vaginosis and trichomoniasis, in pregnant women emphasizes the need to adopt effective strategies for their early detection and proper treatment.

### Conclusion

Pathological vaginal discharge strongly associated with threatened preterm, PROM and prematurity. These results stress a need for proper diagnosis and management of vaginal discharge and pregnant women should be educated on good hygiene habits. Vaginal discharge significantly increased maternal and infant morbidity and mortality. Our study concludes the need for timely detection and an urgent need for intervention.

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