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Pathological vaginal discharge among pregnant women: Prevalence, pattern and related complications

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Abstract

Introduction: Vaginal discharge is the most frequent complaint among women of child bearing age that requires care and hygiene. Pathological vaginal discharge leads to multiple complications in both mother and fetus.

Aims and Objectives: Purpose of this study was to determine the prevalence of vaginal discharge, pattern, common infectious causes, risk factors associated with pathological discharge and its complications.

Materials and Methods: A prospective study was done from November 2021 to April 2022 in Department of Obstetrics and gynaecology at Sawai Man Singh hospital, Jaipur Rajasthan. This study included pregnant women with vaginal discharge.

Result: A total of 300 women attending antenatal clinic with vaginal discharge were studied. Out of 300 vaginal discharge patients there were 174(58%) primigravida and 126(42%) were multigravida. Out of 300 women 90(30%) women were symptomatic and 210(70%) asymptomatic. Out of 90 (30%) symptomatic patients 54(60%) have Vaginal Candidiasis, 27(30%) have Bacterial Vaginosis and 9(10%) have Trichomoniasis. Out of 90 (30%) symptomatic patients there were 24(26.7%) developed threatened preterm, 15(16.7%) premature rupture of membrane (PROM), 5(5.5%) Preterm delivery.

Conclusion: In pregnant women pathological vaginal discharge is found to be more common in younger age group and in primigravida. Pathological vaginal discharge is associated with threatened preterm, PROM and prematurity. Our study concludes for timely detection, management and prevention of complications and advise on good hygiene habits.

Keywords: Vaginal discharge, bacterial vaginosis, candidiasis, trichomoniasis, preterm, pregnancy

Introduction

Vaginal discharge is the most frequent complaint among women of child bearing age that requires care and hygiene. Vaginal discharge may be normal or abnormal. Physiological vaginal discharge in pregnancy is colourless or white, non-irritating, and odourless with no complications. In contrast, pathological vaginal discharge may be yellow, green, brown, or red, with a foul smell, pruritus, or dysuria depending on the cause of infection. Studies in developed countries have shown that up to 90% of vaginal discharge cases result from sexually transmitted infections [1, 2]. 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* [3]. 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 [4]. 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 [5]. 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 [6]. so early detection of pathological discharge and proper treatment can be done and both mother and fetus can be prevented from complications.

Purpose of this study was to determine the prevalence of vaginal discharge, pattern, common infectious causes, risk factors associated with pathological discharge and its complications.

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Aim and Objective

To determine the prevalence, pattern and risk factors associated with pathological discharge and its complications.

Materials and Methods

A prospective study was done from November 2021 to April 2022 in department of OBG at SMS hospital Jaipur Rajasthan. All pregnant women with vaginal discharge are included in this study. Patients with vaginal discharge are evaluated with the below test

1. Clinical history
2. Blood investigations such as CBC, RBS and urine

- routine/microscopy
3. High vaginal swab for culture and sensitivity

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).

Result

Total of 300 women attending antenatal clinic with vaginal discharge were studied. Out of them 210 were asymptomatic and 90 were symptomatic patient

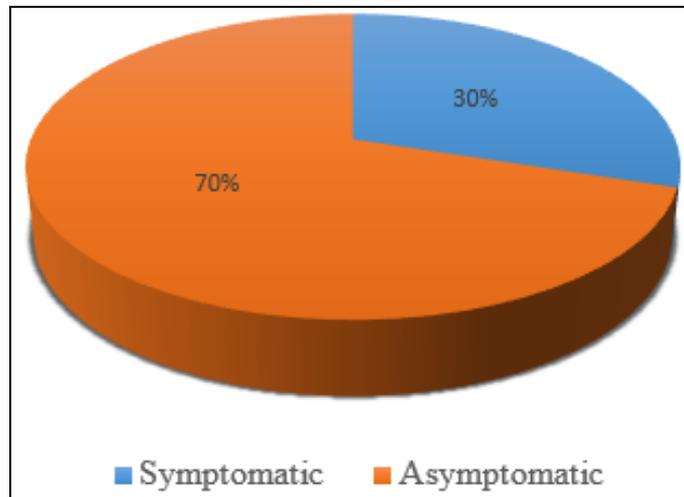


Fig 1: % of symptomatic and asymptomatic patients

Out of 300 pregnant women who developed Vaginal discharge, 174 (58%) were primigravida and 126(42%) were multigravida.

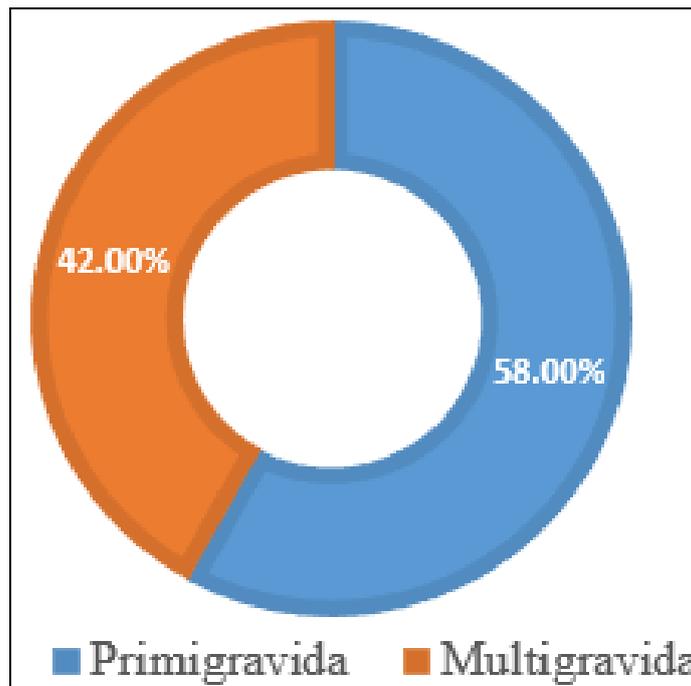


Fig 2: % of Primi and Mutligravida patient

Age distribution

Out of 300 pregnant women 60 were <= 20 years of age, 114

were between 21 to 25 years of age, 90 were between 26 to 30 years of age and 36 were between 31 to 35 years of age.

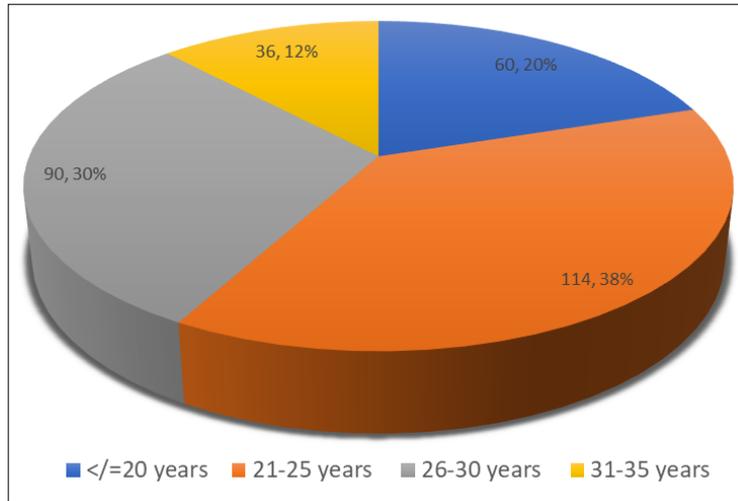


Fig 3: Age distribution and cases

Risk factors

Out of 300 patients there were 180 from low socioeconomic status risk group, 45 were from anaemia risk group 31 were

from urinary tract infection risk group, 24 were from vaginal discharge in previous pregnancy and 20 were from diabetes risk group.

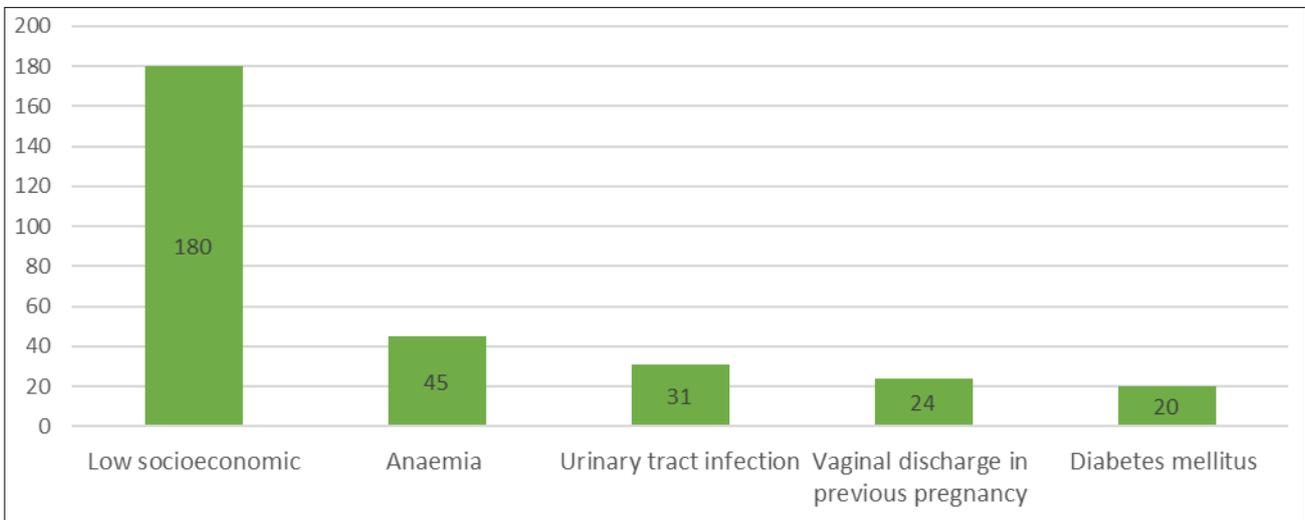


Fig 4: Risk factors for pathological vaginal discharge

Incidence of vaginitis in symptomatic patients: Out of 90(30%) symptomatic patients there were 54(60%) Vaginal Candidiasis, 27 (30%) Bacterial Vaginosis and 9 (10%) Trichomoniasis.

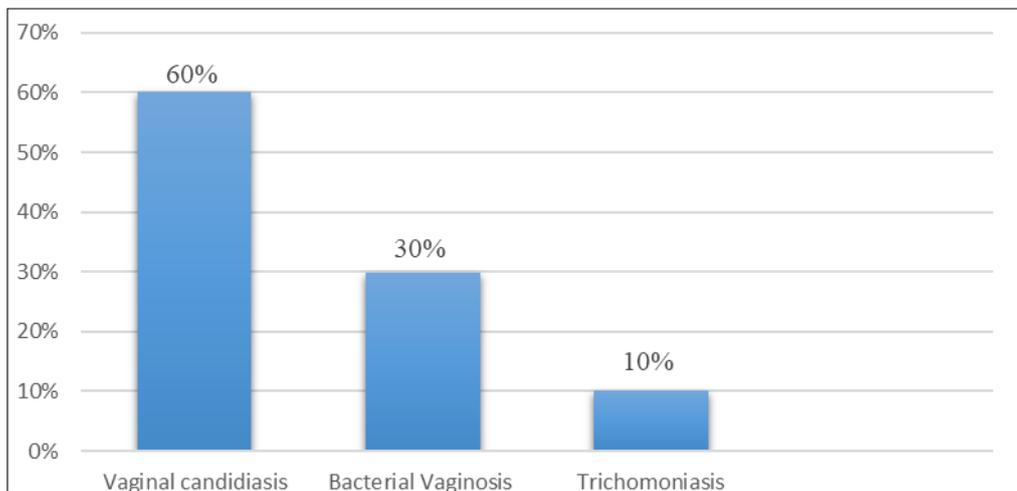


Fig 5: Incidence of vaginitis in symptomatic patient

Out of 90 (30%) symptomatic patients there were 24(26.7%) developed threatened Preterm, 15 (16.7%) PROM, 5(5.5%) Preterm delivery.

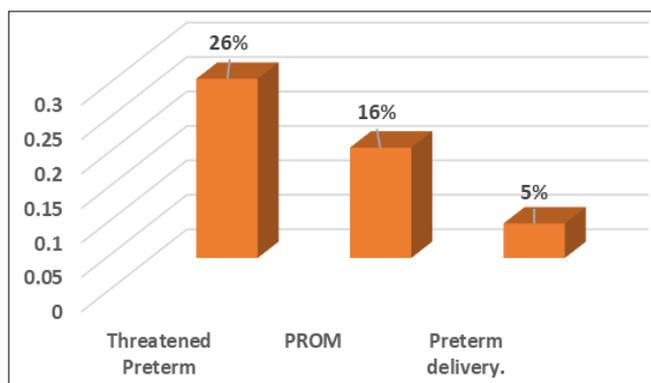


Fig 6: Complication of pathological vaginal discharge

Discussion

In our study prevalence of pathological vaginal discharge was 40.5% as total pregnant women was 740 from which 300 pregnant women had pathological Vaginal discharge. Which was slight less than the prevalence of 43% reported by Da Fonseca *et al.* in Brazil [7]. And a similar analysis done in Saudi Arabia that reported an increased incidence of 72.2% [8]. These greater prevalence rates were probably a result of inadequate health-seeking behaviour and inadequate understanding of perineal hygiene.

In our study higher prevalence of vaginal discharge during pregnancy was seen in women younger than 24 years. A number of studies have reported higher prevalence of vaginal discharge symptoms and STDs in younger women [9]. In addition to their greater biological vulnerability, adolescents are more susceptible to engaging in risky behaviours 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 cross-sectional study conducted by Tania Maria and *et al.* [7] in the city of Rio Grande, 2,395 pregnant women were included in the study. The prevalence of vaginal discharge during pregnancy was 43% among all women studied. About 20% were adolescents (younger than 20), 44% were primiparous and 11% reported pathological vaginal discharge in a previous pregnancy. Pathological vaginal discharge during pregnancy was significantly associated with the following variables: maternal age; vaginal discharge in a previous pregnancy (84%); diabetes (45.3%) and urinary infection (54.2%).

In a study conducted by Sanusi Mohammed Ibrahim and *et al.* [10] in the University of Maiduguri Teaching Hospital, Nigeria. 800 pregnant women were studied. Although vaginal discharge is common in pregnancy but distinguishing abnormal from normal discharge of pregnancy is challenging. In this study vaginal candidiasis, trichomoniasis and bacterial vaginosis are three common causes of pathological vaginal discharge in pregnancy; every effort should be made to diagnose these conditions in pregnant patients so that proper treatment can be done timely.

The most common symptom reported in our study was dysuria,

followed by itching redness, swelling and lower abdominal pain, while the study conducted in Saudi Arabia [8] reported itching, followed by redness, dysuria, and swelling.

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* [11]. 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% [12]. The variations in bacterial vaginosis have been linked to sociodemographic traits, reproductive health, sexual practices, and genital hygiene.

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 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. 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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