



## Original Article

# Prevalence and Determinants of Vaginal Discharge in Married Women of Reproductive Age Group in Eastern Medical College and Hospital of Cumilla, Bangladesh

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### Abstract

**Background:** The complaint of vaginal discharge is very common, particularly in Southeast Asia. Recent evidence showed that the association between vaginal discharge and reproductive tract infection is weak. So, vaginal discharge can be least understood not only in the biomedical perspective, but also in the socio-cultural and physiological perspective. Vaginal discharge is also associated with considerable divisibility, health seeking and associated cost. Proper understanding of this problem helps in initiating appropriate medical education program and framing health policy. This study was aimed to determine the prevalence of vaginal discharge, the socio-demographic factors associated with it, women's perception of vaginal discharge and their treatment seeking behavior. **Methods:** This was a hospital based cross-sectional study conducted in outpatient department of obstetrics and gynecology in Eastern Medical College and Hospital, Kabila, Cumilla. Women with vaginal discharge interviewed with pre-tested questionnaire and socio-demographic details, obstetric history, contraceptive practice, personal and menstrual hygiene were noted. Detail history about characteristics of discharge and lab examination was done to find out its causative organism. Statistical analysis of significance of association of different variable was done. **Result:** The prevalence of vaginal discharge was found to be 25.39%. Its prevalence was found to be more in the age group 29-35 years, illiterate 53.03%, most of the women (59.09%) belonging to low socio-economic status and those who were married at less than 18 years and history of home delivery (66.67%) found to be significant associated vaginal discharge. Weakness (29.17%) and poor personal hygiene (25%) was received as a cause of vaginal discharge. Lower abdominal pain (42.86%), dysuria (31.17%) and itching in genitalia (23.38%) were the most prevalent comorbidities with vaginal discharge. Majority of the women had moderate vaginal discharge (68.18%), creamy in color, no odor in 59.09% cases. *Candida albicans* was the pathogen isolated most (38.46%), followed by *trichomonas vaginalis* (34.62%). **Conclusion:** The socio-demography and predictors of abnormal vaginal discharge in the study should be taken into account in order to improve early detection and identify the women at risk of abnormal vaginal discharge. Improvement of the literacy rate, economic status and women empowerment would help to mitigate the problem of vaginal discharge.

**Key words:** Reproductive health, Vaginal discharge, Gynecological problem, Socio-demographic correlates

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### Introduction

Normal vaginal discharge in women of a child bearing age, is the result of a physiological process involving secretion from cervical and Bartholin's gland and the desquamation of vaginal epithelial cell<sup>1</sup>. This discharge which is non-offensive, clear or white, flow out of the vagina everyday with the color and thickness changing with the monthly menstrual cycle<sup>2</sup>. This normal vaginal discharge can become abnormal with about 40% of women who experience vaginal discharge having some type of vaginitis as a result of the distortion in the balance of the microorganisms that is exerted by lactobacillus within the micro-environment of the vagina<sup>3</sup>.

Reproductive health has gained great importance recently as reproductive tract infections, if not treated causes morbidity such as recurrent urinary tract infections (UTI), pain during coitus, menstrual irregularity, infertility, chronic pelvic pain, ectopic pregnancy, abortion, still birth, neonatal deaths and even the maternal mortality<sup>4</sup>. The commonest reproductive tract infection among women is vaginal discharge. It is found to be very common among the South Asian women. Almost every fourth women visiting the gynecological outpatient department (OPD) have this common complaint of abnormal vaginal discharge<sup>5</sup>.

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The medical term used to describe this is 'leucorrhoea'. The term leucorrhoea is strictly defined as whitish viscid vaginal discharge resulting from inflammation or congestion of the mucous membrane. This may be physiological or pathological. An increase in the normal vaginal secretion develops physiologically at puberty, during pregnancy, at ovulation, sexual arousal and premenstrual phase of menstrual cycle. Pathological discharge may be infectious or noninfectious. Infectious discharge may be due to specific infections such as Gonorrhoea, Trichomoniasis, Chlamydia trachomatis infection which are sexually transmitted and disturbance in the normal vaginal flora causes Moniliasis and bacterial vaginosis. Some amount of vaginal discharge is perceived by many women as normal. Women resort to medical help when it is excessive or have fear of contacting a sexually transmitted infection (STI) or malignancy. The perceived severity of the problem varies from person to person<sup>3-5</sup>.

Women are the silent sufferer of this problem. It is not only affecting her routine physical and social activity but also her mental health and all aspects of women's life. It restricts her domestic and occupational work thus resulting in social and economic problem<sup>5,6</sup>.

The World Health organization has recommended syndromic management, in which women with complaining of discharge are treated for some or all of the five common reproductive tract infections-Chlamydia trachomatis infection, Gonorrhoea and Trichomoniasis which are sexually transmitted infection and bacterial vaginosis and Candidiasis, which result from disturbance in the normal bacterial flora of vagina<sup>6</sup>. Majority of the women with the excessive vaginal discharge, bear the problems silently without seeking advice and treatment<sup>7</sup>. This gynecological disorder has substantial impact on female reproductive ability, mental health and ability to work and to perform routine physical activities<sup>8</sup>.

Different socio-demographic and maternal factors have been reported to be associated with the occurrence of abnormal vaginal discharge<sup>9,10</sup>. Thus the assessment of these factors gives an insight in to the likely predictors for abnormal vaginal discharge. Hence determining the likely associated socio-demographic and maternal factors in the environment of study may enable the development of suitable local management protocol. This will provide some guidance to further strengthen the syndromic management approach and possibly help in management approach and help in identifying those at high risk for STI, so appropriate tests can be offered when absolutely needed.

This study was therefore conducted to determine the prevalence, pattern, socio-demographic and maternal predictors of abnormal vaginal discharge, the magnitude of problem of vaginal discharge and its social correlates, treatment seeking behavior, perceived causes of vaginal discharge and its association with other gynecological problems among the women of reproductive age attending the OPD of Eastern Medical College and hospital, Cumilla, Bangladesh.

### Materials & Methods

The present study was conducted in gynecological outpatient department of Eastern Medical College and Hospital, Cumilla. The study was conducted from June 2020 to December 2020. This was a hospital-based cross-sectional study among the female respondents in reproductive age group 15 to 49 years attending obstetrics and gynecology OPD. A total 520 patient in reproductive age group were studied. The responder was interviewed six days a week during OPD time from 10 am to 3 pm. Among them 132 women in reproductive age group were complained of vaginal discharge.

**Inclusion criteria:** All married women of the reproductive age group of 15 to 49 years. **Exclusion criteria:** Pregnant women, unmarried women, women who have undergone hysterectomy, women who did not give consent.

All the female included in the study informed about the purpose of the study. The necessary information was collected on a semi-structured questionnaire. The information included was socio-demographic details, personal hygiene, menstrual history, history of vaginal discharge, lower abdominal pain, burning sensation during micturition and treatment seeking behavior. The data was tabulated on excel sheet and was analyzed by the SPSS software version 21.

### Results

Total 520 women of reproductive age group were studied. Vaginal discharge was found to be present in 132 women. So, the prevalence of vaginal discharge was found 25.39%; all were married and age group between (15-49) years. 25% of the responders were in the age group of (29-35) years. Among them 93.94% of the responder were Muslims. Nearly half of them were illiterate (53.03%), 59.09% belongs to lower middle class and most of the women were home maker (77.27%) [Table-I]. 36.36% of women had parity of three and more and prevalence of vaginal discharge was found to be higher in woman who had home delivery (66.67%). 43.18% had a history of abortion and discharge was more among the women who did not used any contraceptive (47.73%) than who used barrier method (18.18%) [Table-II].

**Table-I: Association of abnormal vaginal discharge with socio-demographic characters**

Characters	Abnormal vaginal discharge, n (%)
<b>Age</b>	
15-21	30 (22.73)
22-28	30 (22.73)
29-35	33 (25)
36-42	24 (18.18)
43-49	15 (11.36)
<b>Educational status</b>	
Illiterate	70 (53.03)
Primary	33 (25)
Secondary	20 (15.15)
University	9 (6.82)
<b>Religion</b>	
Muslim	124(93.94)
Hindu	6(4.55)
Others	2(1.51)
<b>Occupation</b>	
Working	15(11.37)
House-wife	102(77.27)
Student	15(11.36)
<b>Socioeconomic status</b>	
Higher	6(4.55)
Middle	18(13.64)
Lower Middle	78(59.09)
Lower	30(22.72)

**Table-II: Association of abnormal vaginal discharge with maternal variables**

Variable	Abnormal vaginal discharge, n (%)
<b>Children</b>	
0	15 (11.37)
1	27 (20.45)
2	42 (31.82)
3+	48 (36.36)
<b>History of abortion</b>	
Yes	57 (43.18)
No	75 (56.82)
<b>Contraceptive use</b>	
Not using	63 (47.73)
Condom	24 (18.18)
OCP	21 (15.90)
IUD	6 (4.55)
Injection	12 (9.09)
Tubectomy	6 (4.55)
<b>Place of delivery</b>	
Hospital	45 (33.33)
Home	90 (66.67)

The majority of the women with the vaginal discharge had another coexisting gynecological complaint like pain in the lower abdomen (43%), burning sensation during micturition (31%) and itching in the genital area (23%) [Table-III].

**Table-III: Prevalence and association of gynecological symptoms with complaints of vaginal discharge**

Complaints	Presence of vaginal discharge n (%)
Itching in the genital area	54 (23.38)
Sores or blisters in the genital area	6 (2.59)
Pain in lower abdomen	99 (42.86)
Burning during micturition	72 (31.17)

Causes of vaginal discharge as perceived by women were listed in Table-IV. Weakness (29.17%) was perceived as a main cause for vaginal discharge, followed by poor personal hygiene (25%).

**Table-IV: Vaginal discharge and its perceived causes by women**

Causes	Women n (%)
Weakness	35 (29.17)
Poor personal hygiene	30 (25)
Internal gynecological problem	28 (23.33)
Heat	21 (17.5)
Melting of bone	4 (3.33)
Visit to other women by husband	2 (1.67)

**Table-V: Pattern of abnormal vaginal discharge**

Pattern	Abnormal vaginal discharge, n (%)
<b>Quantity</b>	
Small	12 (9.09)
Moderate	90 (68.18)
Huge	30 (22.73)
<b>Duration</b>	
Less than 15 days	26 (19.70)
More than 15 days	106 (80.30)
<b>Color</b>	
White	57 (43.18)
Creamy	63 (47.73)
Greenish	12 (9.09)
<b>Consistency</b>	
Thick	90 (68.18)
Thin	42 (31.82)
<b>Odor</b>	
No Odor	78 (59.09)
Malodor	54 (40.91)
<b>Pathogen isolated</b>	
Yes	52 (39.40)
No	80 (60.60)
<b>Type of pathogen isolated</b>	
Candida Albicans	18 (34.62)
Gardnerella Vaginalis	6 (11.54)
Trichomonas Vaginalis	20 (38.46)
Streptococcus Pyogenes	8 (15.38)

Women who have experienced abnormal vaginal discharge were asked questions regarding discharge. The commonest color of the discharge was creamy (47.7%) followed by white (43.2%). Total 40.9% women reported that their discharge had malodor. Discharges reported to be present continuously in 42.3% women and rest reported to be present off and

on. Regarding hygiene of women, 80.2% women change their undergarments daily, 70% women bath daily during menstruation. Still now 42.3% women uses cloth during menstruation. However, laboratory test observed that *Candida albicans* was the most commonly isolated pathogen followed by *trichomonas vaginalis* [Table-V].

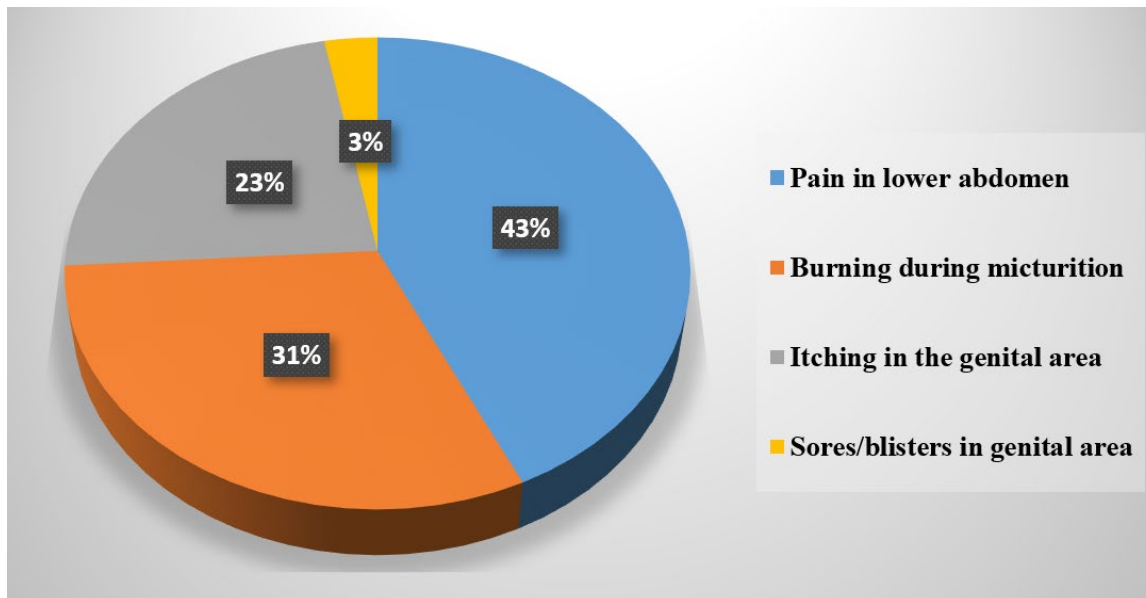


Figure-1: Prevalence and association of gynecological symptoms with complaints of vaginal discharge

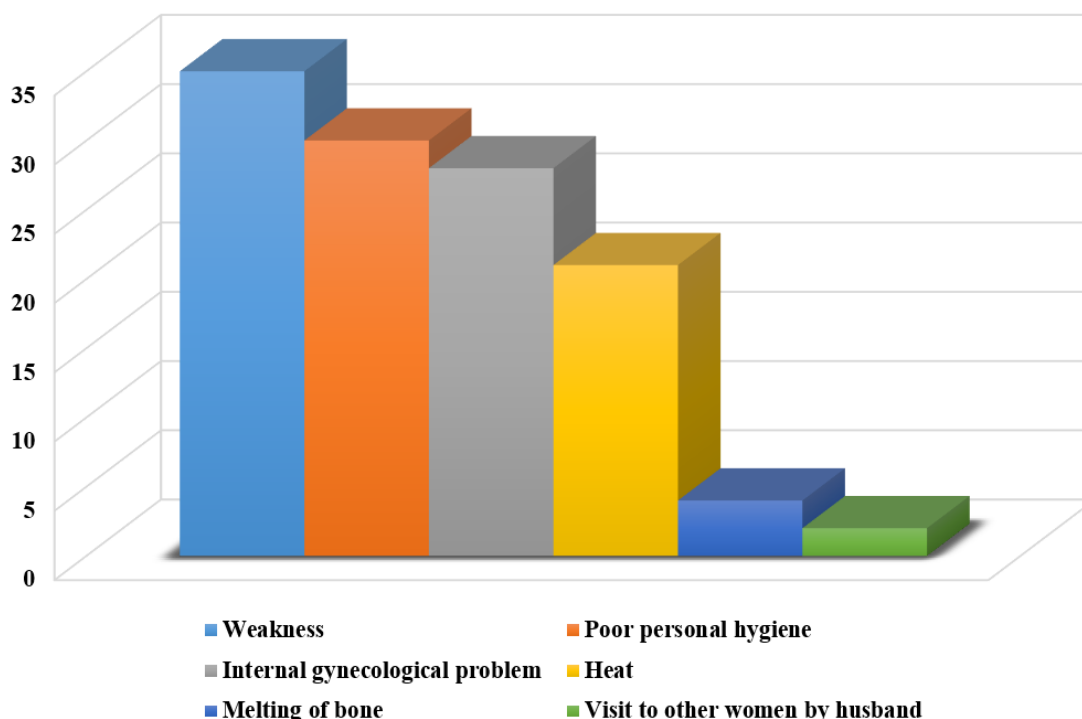


Figure-2: Vaginal discharge and its perceived causes by women

**Discussion**

The prevalence rate of vaginal discharge reported in the present study was 25.39%, implied that every fourth women suffered from vaginal discharge in the study sample. Similar percent of women suffering

from vaginal discharge were also reported by Singh AJ<sup>11</sup> in their study and they consider vaginal discharge as one of the commonest reproductive health problems of women. Kulkarni RN et al.<sup>12</sup> reported leucorrhoea in 27.47% women. This was

more than our study. But the prevalence rate was higher than previous community-based studies by Bang RA et al.<sup>13</sup> (13.5%).

In our study vaginal discharge was found to be more among female aged 29-35 years, percentage was about 25.38%. But the prevalence rate was higher in the younger age group of 15-24 years like that the study of Patel V et al.<sup>6,14</sup>. It may probably be due to younger age at marriage, the immature cervical epithelium which is more susceptible to the ascending infection and lack of use of contraception. However, study done by Chaudhary V et al. reported a higher prevalence among married woman who were more than 40 years of age<sup>15</sup> which was more than our study.

Ratel V et al.<sup>16</sup> reported higher prevalence of vaginal discharge among illiterate and Muslim women. This is in consonance with our study. Vaginal discharge was more among low socio-economic status women. Women in low socio-economic status group with poor hygiene could be contributory factor for the occurrence of vaginal discharge among that group.

In this study prevalence of vaginal discharge increased with parity, which is similar to Chaudhary VR et al.<sup>9</sup> They found an increase in the prevalence of vaginal discharge with increase parity. But the study done by Indira Guntory et al. and Patel V et al.<sup>17</sup> did not show any association with parity.

Place of delivery was significantly associated with vaginal discharge, which was in consonance with the studies of Sharma AK et al.<sup>18</sup> and Chaudhary VR et al.<sup>9</sup> Women who had home delivery had a higher prevalence of vaginal discharge probably due to unhygienic surrounding and increased risk of infections.

There was no association of vaginal discharge with abortion in our study, but the study done by Caiyan et al.<sup>19</sup> found that vaginal discharge was more among women with history of abortion.

Vaginal discharge was found to be more among those women who didn't use any contraceptive (47.7%) and who had adopted condom (18.18%). Pant B et al.<sup>20</sup> in their study, which was conducted in one of the rural areas, showed that discharge was more among women who adopted sterilization. There was dissimilarity between these two studies.

Weakness was perceived as a main cause for vaginal discharge by the woman in our study. In study conducted by Kashyap et al. internal gynecological problem was perceived as the main cause of vaginal discharge<sup>21</sup>. Gynecological symptoms like itching in genital area, pain in lower abdomen, burning sensation during micturition were found to be

strongly associated with vaginal discharge found in this study have similar association with other studies but the percentage of women suffering from these complaints were less in our study as compare to those studies<sup>19-21</sup>.

### Conclusion

Social and economic empowerment of women are the key areas of intervention to bring about positive change in the reproductive health of women. Improvement of education, socioeconomic status of women, increasing awareness about personal and menstrual hygiene and awareness about the temporary methods of contraception would help a lot in ameliorating the problem of excessive vaginal discharge.

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