

Assessing the Characteristics of Vaginal Discharge: A Critical Perspective on Women's Health

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Abstract

Background: Vaginal discharge is a common gynecological problem of varying etiologies affecting women's health. This study aimed to assess the characteristics of vaginal discharge in women and aimed to bridge the gap by assessing knowledge, attitude and practice related to menstrual and puerperal hygiene.

Materials and methods: This cross-sectional study was conducted at the outpatient department of Obstetrics and gynecology at Chattagram Maa-O-Shishu Hospital Medical College, from July to December 2018 and included 91 women presenting with vaginal discharge and related problems. Data were collected through pretested semi structured questionnaires, clinical examinations, High Vaginal Swab (HVS) Pap Smear and Urine Routine and Microscopic Examination (RME) and Culture Sensitivity (C/S).

Results: The majority of participants were in the 20-24 (34.07%) and 25-29 (26.37%) age groups, predominantly married (90.11%), largely housewives (75.82%) with education below higher secondary level (59.34%). Over half (51.65%) were overweight. Oral contraceptives were the most common contraceptive method (35.16%). Good menstrual hygiene and puerperal hygiene practiced by 43.96% participants and poor menstrual and puerperal hygiene by 56.04%. HVS results showed Candida and mixed infections (10.99% each) Trichomonas (8.79%) and Bacterial Vaginosis (BV) (3.30%). Pap Smear indicated a range of infection severity and Urine RME& C/S revealed infection rate 30.77%.

Conclusion: The study highlights the need for accurate diagnosis and comprehensive reproductive healthcare and practice of healthy menstrual and puerperal hygiene to manage vaginal discharge effectively. It emphasizes the significance of various factors such as lifestyle, educational background and clinical characteristics for accurate diagnosis and treatment.

Key words: Vaginal discharge; Gynecological infection; Menstrual and puerperal hygiene; Women's reproductive health.

INTRODUCTION

Globally, women's health issues are of paramount importance, impacting not only the individual's but also the broader society. Despite advancements in healthcare, women continue to confront unique health challenges, often intensified by socio-economic disparities and cultural stigmas.^{1,2} Among these challenges, vaginal discharge stands out due to its significant implications for women's health. Vaginal discharge, while a normal physiological phenomenon, can also be indicative of various health conditions. However, there exists a widespread lack of awareness and numerous misconceptions surrounding it, often leading to delayed medical consultation and treatment.^{3,4}

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The types and causes of vaginal discharge are diverse, encompassing a spectrum from normal physiological condition to infections and other pathological conditions. Common causes include bacterial vaginosis and vulvovaginal candidiasis, each presenting with distinct characteristics and requiring specific management approaches.^{5,6} The implications of untreated or improperly managed vaginal discharge are significant, ranging from acute discomfort and psychological distress to chronic reproductive health issues and increased risk of serious complications.^{7,8} Globally, and particularly in Asia, the incidence of vaginal discharge and related complications presents a substantial public health concern.⁹ In Bangladesh, the status of women's health is influenced by cultural norms, socio-economic conditions and healthcare infrastructure. Cultural and societal norms in Bangladesh can also impact women's health-seeking behaviors, particularly concerning reproductive health issues like vaginal discharge.^{10,11} The existing literature on the observation of vaginal discharge characteristics in Bangladeshi women is limited, indicating a significant research gap. This gap is particularly concerning given the potential implications of vaginal discharge for women's reproductive health and the broader public health implications in a densely populated country like Bangladesh.^{12,13} Menstruation and puerperium, a natural facet of female reproductive cycle, signifies crucial developmental milestone that demands attention to Menstrual Hygiene Management (MHM) and Puerperal Hygiene Management (PHM). Poor menstrual hygiene and puerperal hygiene management are responsible for abnormal vaginal discharge and thereby significant reproductive tract infections. Understanding the characteristics of vaginal discharge in this context is crucial, not only for improving individual health outcomes but also for informing public health policies and interventions tailored to the unique needs of Bangladeshi women. This study aimed to assess the characteristics of vaginal discharge in women and aimed to bridge the gap by assessing knowledge, attitude and practice related to menstrual and puerperal hygiene.

MATERIALS AND METHODS

This cross-sectional study was conducted at Chattagram Maa-O-Shishu Hospital Medical College over a six-month period from July to December 2018. During the study period total population were 178. Among them, Exclusion criteria were – age <15 years (4) pregnant women (71) genital malignancies (3) not giving consent (9) resulting in a final sample size of 91 women who presented at the hospital with vaginal discharge. The inclusion criteria comprised all women over the age of 15, regardless of marital status, who sought medical attention for excessive vaginal discharge at the Outpatient Department of Obstetrics and Gynecology at Chattagram Maa-O-Shishu Hospital Medical College. Data collection procedures involved the utilization of structured questionnaires and clinical examinations. The questionnaire was meticulously designed to

elicit demographic information, medical history and specific details concerning vaginal discharge symptoms. Statistical analysis of the collected data was carried out using SPSS Version 25. Prior to participation, informed consent was obtained from all individuals involved. Furthermore, the study adhered strictly to the ethical standards outlined by the institutional research committee.

RESULTS

Table I showed the socio-demographic characteristic, majority were in the 20-24 years (34.07%) followed by 25-29 years (26.37%). Regarding education below higher secondary level (59.34%), illiterate participants made up 13.19% of the sample. Overweight patients were (51.65%) (Fig 1). The data shows that 35.16% of the participants were using oral contraceptives (Table II). Comorbidities were diabetes (10.99%) and anemia (6.59%) (Table III). Among the total participants, only 43.96% participants had practiced good menstrual hygiene, while the remaining 56.04% had poor hygiene (Fig 2). In case of poor hygiene (n=51) 59% had proper knowledge about menstrual and puerperal hygiene, 57% used clothes and 43% used sanitary pads, 67% cleaned reused clothes with soap and water and dry properly, frequency of changing >4 times per day about 27%, 80% participants took daily bath and about 57% did not properly disposed their materials (Table IV). Majority of the participants (47.25%) experienced moderate discharge, followed by 36.26% who had profuse discharge. Itching was present in 61.54% of the participants and 35.16% of the participants had foul smell vaginal discharge. Discharge color, were curd-like, (42.86%) watery discharge was in 27.47%, while other types (19.78%) the most common associated symptom reported were dyspareunia (40.66%) followed by dysmenorrhea (35.16%) of the women (Table V). High Vaginal Swab (HVS) revealed Candida and mixed infections were in 10.99% cases. Trichomonas was in 8.79% of the participants, while Bacterial Vaginosis (BV) was present in 3.30% of the cases. Pap smear tests showed that 16.48% had mild infections, 6.59% had moderate infections and 8.79% had severe infections. Urine Routine and Microscopic Examination (RME) revealed that 30.77% showed signs of infection, while the remaining 69.23% had no infection (Table VI).

Table I Socio-demographic characteristics among the participants (n=91)

Socio-demographic Characteristics	Frequency	Percentage (%)
Age		
15-19	4	4.40%
20-24	31	34.07%
25-29	24	26.37%
30-34	14	15.38%
35-39	12	13.19%
>40	6	6.59%

Socio-demographic Characteristics	Frequency	Percentage (%)
Marital Status		
Married	82	90.11%
Unmarried	8	8.79%
Divorce	1	1.10%
Occupation		
Student	9	9.89%
Housewife	69	75.82%
Service	13	14.29%
Education		
Illiterate	12	13.19%
Below Higher Secondary	54	59.34%
Above Higher Secondary	25	27.47%
Economic Status		
Upper (Class 1&2)	25	27.47%
Lower (Class 3-5)	66	72.53%

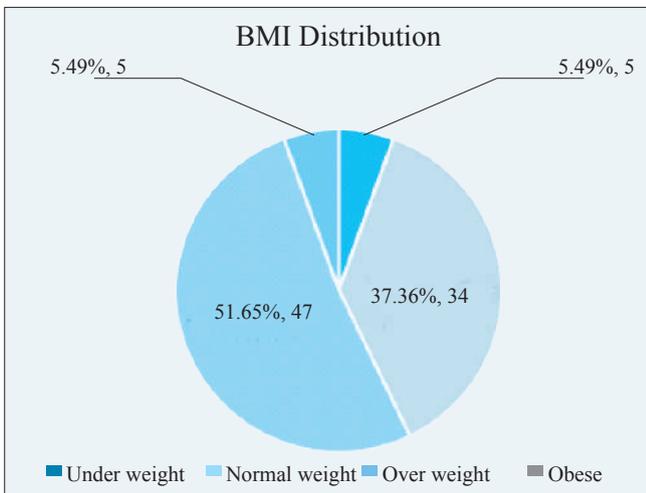


Figure 1 Distribution of participants by BMI classification (n=91)

Table II Contraceptive practice (n=91)

Contraception Usage	Frequency	Percentage (%)
Oral Contraceptives	32	35.16%
Intrauterine Device (IUD)	7	7.69%
Condom	23	25.27%
No Contraceptive Usage	29	31.87%

Table III Distribution participants by existing comorbidities (n=91)

Comorbidities	Frequency	Percentage (%)
Diabetes	10	10.99%
Anemia	6	6.59%

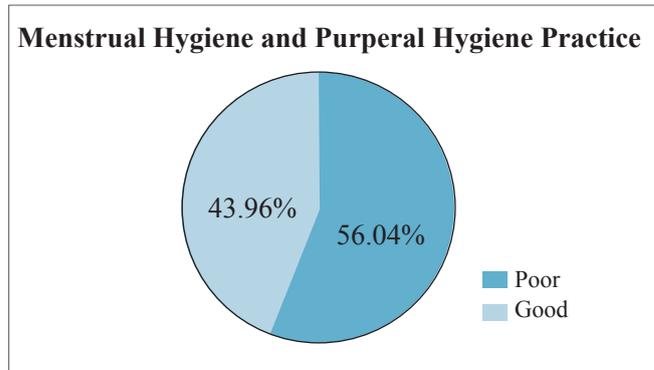


Figure 2 Menstrual hygiene and puerperal hygiene practice among the participants (n=91)

Table IV Poor menstrual and puerperal hygiene management (n=51)

	Yes %	No %
Knowledge natural process, menstrual and puerperal material	60%	40%
Attitude and practices- Clothes	57%	43%
Pads	43%	57%
Proper body cleaning with soap and water	80%	20%
Clothes if reuse clean with soap and water daily and dry properly	67%	33%
Frequency of changing >4 times per day	27%	73%
Proper disposal of materials	43%	57%

Table V Characteristics of vaginal discharge and symptoms. (n=91)

Variables	Frequency	Percentage (%)
Discharge Type		
Mild	15	16.48%
Moderate	43	47.25%
Profuse	33	36.26%
Itching		
Present	56	61.54%
Absent	35	38.46%
Foul Smell		
Present	32	35.16%
Absent	59	64.84%
Discharge Color		
Watery	25	27.47%
Curd	39	42.86%
Frothy	9	9.89%
Others	18	19.78%
Symptoms		
Dysuria	31	34.07%
Dyspareunia	37	40.66%
Dysmenorrhea	32	35.16%

Table VI Investigation types and findings (n=91)

Investigative Findings	Frequency	Percentage (%)
HVS		
Candida	10	10.99%
Trichomonas	8	8.79%
BV	3	3.30%
Mixed Infection	10	10.99%
Noinfection	60	65.93%
Pap Smear		
Mild Infection	15	16.48%
Moderate infection	6	6.59%
Severe infection	8	8.79%
Normal	62	68.13%
Urine RME		
Infection	28	30.77%
No Infection	63	69.23%

DISCUSSION

The current study's findings on the observation of vaginal discharge characteristics in women of Bangladesh provide significant insights, particularly when compared with existing literature. The age distribution aligns with global trends indicating that younger women are more frequently affected by vaginal discharge issues.⁹ This pattern is consistent with the findings from Vietnam and China, where reproductive-age women showed a higher prevalence of *Candida albicans* and *Chlamydia trachomatis* infections, respectively.^{14,15} Majority of the participants (90.11%) being married, highlights the prevalence of vaginal discharge issues in this demographic. This finding is in line with studies that emphasize the need for reproductive health education at the community level, particularly among married women.¹⁶ The high prevalence of vaginal discharge in married women could be attributed to factors such as sexual activity and contraceptive use. Occupation and education also played a significant role, with most participants being housewives (75.82%) and having education below higher secondary level (59.34%). This suggests a potential link between lifestyle, educational background, and vaginal discharge issues, as also observed in studies from urban slum areas.¹⁷⁻¹⁹ Knowledge about MH and PH is a positive predictor of good menstrual and puerperal practice. Knowledge gap and sociocultural influence leads to unhygienic practice. Higher level of education related to good MH and PH. Poor knowledge, attitude and practice contribute to limited awareness and access to healthcare, exacerbating the prevalence and severity of vaginal discharge issues. Over half of the participants (51.65%) were overweight, indicating a possible correlation between body weight and vaginal discharge problems. This finding is supported by research suggesting a relationship between obesity and bacterial vaginosis.²⁰ Studies have shown that contraceptive use,

particularly oral contraceptives, can be associated with an increased risk of bacterial vaginosis.^{21,22} The choice and type of contraceptives used could influence the vaginal microenvironment, thereby affecting the prevalence and nature of vaginal discharge. Patient with poor MH and PH along with symptoms dyspareunia (40.66%) and dysmenorrhea (35.16%) these findings are consistent with other studies that have reported a significant association between vaginal discharge and reproductive health issues.^{23,24} The presence of comorbidities, diabetes and anemia underscores the need for comprehensive reproductive health care. The vaginal discharge characteristics observed in the study, the most common discharge colors were curd-like and watery, which are typically associated with *Candida* infections and bacterial vaginosis, respectively.²⁵ These findings are in agreement with other studies that have reported similar clinical presentations of vaginal discharge.^{9,26} The investigative findings from High Vaginal Swab (HVS), Pap Smear, and Urine Routine and Microscopic Examination (RME) and culture sensitivity in our study highlight the diverse etiology and severity of infections associated with vaginal discharge. The results of HVS test findings underscore the varied microbial causes of vaginal discharge, emphasizing the need for precise diagnosis.^{27,28} Pap smear tests revealed a wide range of infection. This variation highlights the complexity of cervical cellular changes and the importance of Pap smear testing in clinical assessment and management. Furthermore, Urine RME showed an infection rate of 30.77% among the participants, indicating a significant prevalence of urinary tract infections. This finding suggests that urinary health assessments are crucial in diagnosing and managing vaginal discharge, with only 9.68% showing no infection.^{26,29} Menstrual hygiene plays a crucial role in the context of vaginal discharge. Poor menstrual hygiene practices have been associated with increased risk of reproductive tract of infections, including those leading to vaginal discharge.³⁰ A study conducted in India found a significant correlation between inadequate menstrual hygiene and the prevalence of bacterial vaginosis and other vaginal infections.³¹ This is particularly relevant in settings where access to sanitary products and safe menstrual management is limited. The relationship between menstrual hygiene and vaginal health is further complicated by socio-cultural taboos and lack of education, which can prevent women from adopting proper menstrual hygiene practices.³² Most use cloths/pads but gap persists regarding optimal frequency of changing absorb, genital cleaning. The prevalence of menstrual and puerperal materials using sanitary pad indicates good practice, persistence of cloths usage in small quantity underscore the need for continued education and awareness campaign. Gap persists between accurate menstrual and puerperal knowledge, poor attitude & practice in MH and PH. This aspect of women's health needs more attention, especially in low resource settings where such practice is often neglected.

The results from our study, therefore, reinforce the need for a multifaceted diagnostic approach, integrating both clinical assessment and laboratory investigations, to accurately diagnose and manage vaginal discharge related condition and also improved awareness and easy access to health care are essential for this health concern.

LIMITATION

The study was conducted in a single hospital with a small sample size. So, the results may not represent the whole community.

CONCLUSION

The comprehensive analysis of vaginal discharge characteristics in women reveals critical insights into the interplay of demographic, lifestyle, and health-related factor. Knowledge, attitude and practice about menstrual and puerperal hygiene management, along with increasing awareness and easy access to sanitary products is essential in reducing the risk of vaginal infections and associated discharge. This study highlights the necessity for precise diagnosis, integrating clinical evaluation with laboratory testing, to effectively manage vaginal discharge in women.

DISCLOSURE

All the authors declared no competing interest.

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