

Original Article

PREVALENCE AND DETERMINANTS OF VAGINAL DISCHARGE AMONG WOMEN OF REPRODUCTIVE AGE GROUP IN TERTIARY CARE HOSPITAL OF NORTHERN INDIA

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ABSTRACT

Background: The complaint of vaginal discharge is very common, particularly in south East Asia it is associated with considerable disability, health seeking, and associated costs.

Objective: To estimate the hospital based prevalence of vaginal discharge, to find out socio-demographic variables associated with the complaint of vaginal discharge, perceived causes of vaginal discharge and association of vaginal discharge with other gynaecological problems among the women of reproductive age.

Methods: The present cross sectional study was conducted in one of the tertiary care hospital of Bareilly district. The respondent were the female in reproductive age group (15-49yrs) attending Obst. & gynae OPD. Sample size of 590 was calculated, for sample to be more representative of population, a total of 1100 female in reproductive age group were included in the study. . Odds ratio (OR) and their 95% confidence interval (CI) were calculated to estimate the strength of association between vaginal discharge and other gynaecological symptoms. Chi square test was applied as test of significance for data analysis.

Results: Prevalence of vaginal discharge was found to be 24.6%. Factors like increasing age, married (26.2%), illiteracy (60.1%), Muslim religion (28.7%), low socioeconomic status, high parity, history of induced abortion and place of delivery were found to be significantly associated with vaginal discharge. Internal gynaecological problem was perceived as a main cause for vaginal discharge (73.3%). Vaginal discharge was found to be significantly associated with other gynaecological problems.

Recommendation: There is need for creating community awareness about health care facilities and instills self concern in women for their own health needs.

Key words: Vaginal discharge, India, reproductive health, gynaecological problem

INTRODUCTION

The complaint of vaginal discharge is very common, particularly in south East Asia where

about a quarter of all adult women report this complaint. The World Health Organization has recommended syndromic management, in which women 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 infections and bacterial vaginosis and candidiasis, which result from disturbance in the normal bacterial flora of vagina.¹ Majority of women bear the problems silently without seeking advice and treatment.² Gynecological disorders have substantial impact on female reproductive ability, mental health, and ability to work and to perform routine physical activities.³ The present study was undertaken to assess the magnitude of the problem of vaginal discharge, its social correlates, treatment seeking behavior, perceived causes of vaginal discharge and its association with other gynaecological problems among the women of reproductive age attending tertiary care hospital in Bareilly.

MATERIAL & METHODS

The present study was conducted in one of the tertiary care hospital of Bareilly, Uttar Pradesh. A cross sectional study on hospital based prevalence of vaginal discharge, its determinants, its association with other gynaecological problems and treatment seeking behavior was carried out in obstetric and gynaecology OPD of hospital during the month of Feb.2010 to April2010. The respondent were the female in reproductive age group (15-49yrs) attending Obst. & gynaecology OPD. The respondents were interviewed six days in a week during OPD timing which was 10 AM to 3 PM. Sample size of 590 was calculated using the formula $4pq / (20\% \text{ of } p)^2$ assuming the prevalence of vagina discharge 14.5%¹ and margin of error 20%. For sample to be more representative of population and for increasing the accuracy of results, a total of 1100 female in reproductive age group were included in the study. The semi structured schedule used for interviewing women was prepared. The schedule was modified according to the need after pilot testing on 50 respondents. All the women in reproductive age group attending obst. & gynaecology OPD were interviewed with exclusion criteria of pregnant lady, women with any organic pathology of reproductive tract and women in puerperal period. All the female included in the study were informed about the purpose of study. Informed consent was sought prior to each interview. The necessary information was collected on a semi structured schedule. The information collected include socio demographic details, personal hygiene,

menstrual history, history of vaginal discharge, lower abdominal pain and burning during micturition and treatment seeking behavior. Socioeconomic status was assessed according to modified BG Prasad classification.⁵

Data Analysis: The data thus collected was computerized in specific programme developed on Microsoft excel 2007 soft ware. The data base so prepared was analyzed with the help of SPSS statistical software and the results were transferred to predesigned classified tables prepared according to the aims and objectives of the study valid inference were drawn from the information and the results were discussed with the available studies. Odds ratio (OR) and their 95% confidence interval (CI) were calculated to estimate the strength of association between vaginal discharge and other gynaecological symptoms. Chi square test was applied as test of significance for data analysis.

RESULTS

A total of 1100 women in reproductive age group were studied.

Table 1: Association of abnormal vaginal discharge with sociodemographic characters

Characters	Sample (%)	Vaginal Discharge (%)	X ² (df), P- value
Age (yrs)			
15-21	197 (17.9)	26 (13.2)	74.86 (4), <.001
22-28	447 (40.6)	78 (17.4)	
29-35	308 (28.0)	106 (34.4)	
36-42	104 (9.5)	35 (33.7)	
43-49	44 (4.0)	26 (59.1)	
Marital status			
Married	1018 (92.5)	267 (26.2)	18.63 (1), <.001
Unmarried	82 (7.5)	4 (4.9)	
Educational status			
Literate	614 (55.8)	108 (17.59)	37.17 (1) P<.001
Illiterate	486 (44.2)	163 (33.54)	
Religion			
Hindu	776 (70.5)	178 (22.9)	4.09 (1), <.05
Muslim	324 (29.5)	93 (28.7)	
Occupation			
Working	27 (2.5)	3 (11.1)	15.24 (3), P <.005
Housewife	1010 (91.8)	264 (26.1)	
Student	31 (2.8)	2 (6.5)	
Nothing	32 (2.9)	2 (6.3)	
Socioeconomic status			
I	11 (1.0)	2 (18.2)	22.57 (4), <.001
II	41 (3.7)	3 (7.3)	
III	55 (5.0)	9 (16.4)	
IV	192 (17.5)	35 (18.2)	
V	635 (57.7)	164 (25.8)	
VI	166 (15.1)	58 (34.9)	
Total	1100 (100)	271 (24.6)	

More than two third (68.6%) of the women were in age group 22-35 years, majority of them were married (92.5%), nearly half of them were illiterate (55.8%), 70% of them were Hindu and rest were Muslim, most of these women were house wife (91.8%) and most of them belongs to low socioeconomic status.

Vaginal discharge was found to be present in 271 women (24.6%). Vaginal discharge was found to increase with increase in age and it was more among women age 43-49yrs (59.1%). It was found to be more among married women

(26.2%), illiterate (60.1%), Muslims (28.7%), house wife's (26.1%) and in women belonging to class VI of B.G.Prasad classification of socioeconomic status. Difference was found to be statistically significant in all the above variables ($p < 0.05$) (Table 1).

The majority of the women with vaginal discharge had another coexisting gynaecological complaint (94.46%). Each of these complaints was strongly associated with the complaints of vaginal discharge ($p < 0.001$) (Table 2).

Table 2: Prevalence and association of current gynaecological symptoms with the complaints of vaginal discharge

Complaints	Cases (%; 95% CI)	Presence of vaginal discharge in cases No. (%)	OR (95% CI)	p-value
Itching in genital area	276 (25; 1.72- 1.77)	163 (60.15)	9.56 (6.90-13.26)	P<.001
Sores/ blisters in genital area	152 (14; 0.12-0.16)	112 (41.32)	13.89 (9.16-23.14)	P<.001
Pain in lower abdomen	597 (54.3; 1.43-1.49)	228 (84.13)	6.61 (4.58-9.57)	P<.001
Burning during micturition	417 (37.9; 1.59-1.65)	181 (66.79)	4.20 (3.09- 5.72)	P<.001

Women who were experiencing abnormal vaginal discharge were asked questions regarding discharge. The commonest colour of the discharge was white (97.05%) followed by yellow (2.95%). Total 60.52% of the women (reported their discharge to be odourfull.

Discharge was reported to be present continuously in 64.57% women and rest reported it to be present off and on. Majority of the women (91.51 %) reported that they had to change their underwear because of the discharge. Regarding hygiene of the women 93.8% women change their undergarments daily, three fourth women (74.5%) bath daily during menstruation and 72.5% women uses cloth during menstruation. Out of the total women with discharge only 47.60% were taking treatment.

Table 3: Association of vaginal discharge with maternal variables

Variable	Vaginal discharge	Total	X ² (df), p-value
Children			
0	31 (10.7)	289	79.02 (3), <0.001
1	38 (21.7)	175	
2	54 (26.2)	206	
3+	144 (41.4)	348	
Total	267	1018	
History of abortion			
Yes	52 (31.5)	165	2.85 (1), >0.05
No	215 (25.2)	853	
Total	267	1018	
History of induced abortion			
Yes	79 (35.0)	226	11.4 (1), <0.001
No	188 (23.7)	792	
Total	267	1018	
Contraceptive use			
Not using	185 (25.0)	741	2.24 (1), >0.05
Condom	40 (31.0)	129	
OCP	1 (16.7)	6	
IUD	16 (26.7)	60	
Tubectomy	25 (30.5)	82	
Total	267	1018	
Place of delivery			
Institutional	77 (23.5)	328	21.56 (1), <0.001
Other	159 (39.7)	401	
Total	236	729	

Vaginal discharge was found to be significantly associated with number of children, history of induced abortion and place of delivery ($p < 0.001$) (Table 3).

Table 4: Vaginal discharge: it's perceived causes by women

Causes	Women (%)
Weakness	85 (31.36)
Melting of bones	4 (1.47)
Heat	36 (13.28)
Visit to other women by husband	0 (0.0)
Internal gynaecological problem	199 (73.43)
Diet	0 (0.0)
Family planning operation	0 (0.0)
Having too many children	3 (1.11)
Use of Cu-T	7 (2.58)
Poor personal hygiene of women	0 (0.0)

Causes of vaginal discharge as perceived by women were listed in table 4. Internal gynaecological problem was perceived as a main cause for vaginal discharge by three fourth of the women (73.43%), followed by weakness (31.36%).

DISCUSSION

The prevalence rate of vaginal discharge reported in the present study (24.6%) implies that every fourth women suffers from vaginal discharge in the study sample. Similar percent of women suffering from vaginal discharge were also reported by Singh AJ² in their study and they consider vaginal discharge as one of the commonest reproductive health problem of women. Kulkarni RN³ reported leucorrhoea in 27.47% women. Earlier studies^{1,6} had reported lower prevalence of vaginal discharge. This might be because these studies were population based. In our study vaginal discharge was found to be more among female aged forty three and above (59.1%), married (26.2%), and house wife's (26.1%). In contrast to this Patel V et al^{1,6} find higher percentage of vaginal discharge in younger age group, unmarried females and among those who are working. This may be because unmarried and younger age group female with vaginal discharge reported less to the hospital and as our study was confined to hospital so their number is less in our study. Patel V et al reported high prevalence of vaginal discharge among illiterates and in Muslims this is in consonance with our study. As in our study other studies^{3,7} also reported vaginal discharge more among low socioeconomic status women. This may be as many women in low socioeconomic status groups had poor personal and menstrual hygiene, which could be a contributory factor for the occurrence of vaginal discharge.

Gynaecological symptoms like itching in genital area, blisters in genital area, pain in lower abdomen and burning during micturition were found to be strongly associated with vaginal discharge in this study, similar association was shown by Patel V et al¹ in their study but the percentage of women suffering from these complaints were more in our study as compare to their study. Overall prevalence of vulval itching (25%) and pain in lower abdomen (54%) in our study were similar to the study conducted in Goa by Tanksale et al.⁸

As in our study, Kulkarni et³ al also show significant association of discharge with high parity. This is in contrast to the study conducted in Goa by Patel V et al.¹ In present study vaginal discharge was found to be more among women with history of abortion, induced abortion and last delivery non institutional. Sharma AK⁹ et al in their study also shows last delivery domiciliary or conducted by Dai and history of abortion to be significantly associated with reproductive infection whereas study conducted by Rathore M et al¹⁰ shows no association of place of delivery with reproductive tract infection. Vaginal discharge was found to be more among those women who had adopted condom (31.0%) and sterilization (30.5 %) and minimum among the oral pill users (16.7%). Pant B et al¹¹ in their study conducted in one of the rural area of Meerut shows RTI to be more among women adopted sterilization and minimum among those using oral pills. This is in consonance with present study.

Internal gynaecological problem followed by weakness were perceived as a main cause for vaginal discharge by the women in our study. In study conducted by Singh AJ¹⁰ internal gynaecological problem was perceived as a cause for vaginal discharge by the women but not as a main cause, according to their study visit to other women by husband and weakness were the main cause for vaginal discharge. In our study less than half of the women seek treatment for their problem where as in study by Singh AJ consultation rate was 59%.

The study concludes that the factor like increasing age, illiteracy, low socioeconomic status, high parity, induced abortion and place of delivery are all contributory for the occurrence of vaginal discharge. The study recommends for creating community awareness about health care facilities and instills self concern in women for their own health needs. Built-in service component and confidentiality may improve self reporting of reproductive morbidity in survey. Thus such survey could prove to be an inexpensive way for generating continuous information on reproductive health issues for health managers.

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