

## A Study on Prevalence of Vaginal Discharge in Women Attending Tertiary Care Hospital

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### Abstract

*Context:* prospective study. *Aims:* To estimate the prevalence of leucorrhoea (vaginal discharge) among women of reproductive age group and to determine the association of demographic profile with leucorrhoea. *Settings and Design:* This was a prospective study conducted in the department of Obstetrics and Gynecology in tertiary care hospital in GMCH Chandigarh from December 2007 to November 2010. *Materials and Methods:* A total of 500 women were recruited, 250 women were included in study group who had diagnosis of leucorrhoea, and 250 women were included in control group who had some other complaints. Women in reproductive age group were included in the study i.e 20 to 50 years of age. *Statistical analysis used:* simple calculations, mean, percentage. *Results:* Maximum incidence of vaginal discharge was noted in 70% of women who belongs to low socio economic and 30% of women belongs to middle socio economic in study group. Out of 250 cases of study group, Gardnerella vaginalis was found in 22% cases followed by 14% staphylococci, 4% E.coli, Diphtheroids in 3.6%, streptococci in 3.2%, Klebsiella in 2.4%, Micrococci in 1.6%, pseudomonas in 2%, no growth was observed in 2.4%. Incidence of candida was 24% and Trichomonas was 8.8%. *Conclusion:* Maximum incidence of vaginal discharge was

seen in women who belonged to lower socioeconomic class.

**Keywords:** Leucorrhoea; Women; Vaginal Discharge.

### Introduction

Certain diseases may not be life threatening but troublesome and may irritate to an individual in their day to day routine activity. The complaint of vaginal discharge is very common, particularly in our country. A syndromic approach for its management has been recommended by WHO, in which women complaining of vaginal discharge are treated for five common reproductive tract infections: Chlamydia trachomatis infection, gonorrhoea, and trichomoniasis, bacterial vaginosis and candidiasis [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 Gynecological problems among the women of reproductive age group.

### Materials and Methods

This prospective study was conducted in the department of Obstetrics and Gynecology in tertiary care hospital from December 2007 to November 2010. It was approved by institutional ethical committee. The study

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included total of 500 women. Out of this 250 were in case study group that is women with symptoms of vaginal discharge, their age were between 20-50 years with mean age of 28.50, who came to outpatient department with complaints of vaginal discharge for more than 7 days. Other 250 women were taken in control group who attended OPD with other symptoms other than vaginal discharge. Inclusion criteria were women age between 20 to 50 years presenting with vaginal discharge, with or without associated vaginal discomfort, pruritus and burning sensation. The nature of the vaginal discharge varied from thin homogenous to frothy and foul smelling to thick curd like discharge. The discharge may be in dependent areas or adherent to the vaginal wall.

Vaginal samples were collected, Two high vaginal swabs were collected with sterile swabs from the posterior Fornix by using speculum. The pH of vaginal fluid was measured using indication papers. Exclusion criteria were Patients in pre pubertal and post menopausal age groups, and who had undergone treatment for the same symptoms within prior 48 hours. Patients who were menstruating, and in women who had clinical suspicion of carcinoma. A written informed consent was obtained from all the patients. A detailed history, general examination and Gynaecological examination were initially carried out. Detailed Obstetrical history was taken from all the women with special complaint of vaginal discharge. General history of diabetes, hypertension, history of oral pills and IUCD taken.

## Results

Two hundred and fifty patients with leucorrhoea were analyzed for this study. The mean age of the women was 28.50 years (20 to 50 years of age). This group included 52% (130/250) Muslims, 32% (80/250) Hindus and 16% (40/250) Christians. Of the 250 women, 70 (28%) women were uneducated, 86 (34.4%) women had educated up to primary school, 50 (20%) women up to secondary school, 30 (12%) women up to graduation and 14 (5.6%) women up to post graduation. The present study was conducted

to observe the relationship between leucorrhoea and its associated symptoms.

The present study revealed that the disease higher prevalence was observed in reproductive period that is 25-50 years. [Table 1] 60% women in study group belongs to urban area followed by 40% women belongs to rural area.

In study group maximum incidence of vaginal discharge was noted in 70% of women who belongs to low socio economic and only 30% of women belonging to middle socio economic group. Regarding colour of discharge grey coloured (clear) discharge was found in 48% cases, discharge was whitish in 36% women, yellowish green in 16%, thin mucoid discharge was seen in 72%, thick curdy discharge in 20% and frothy discharge in 8% among study group. According to quantification moderate amount of discharge was present in 52% cases, 16% cases had minimal amount of discharge and copious amount was seen in 32% cases. The discharge was associated with bad smell (odour) 28% of women. [Table 2]

Pruritus with discharge was noted in 34.4%, dysuria in 36% and dyspareunia in 24% [Table 3]. According to the symptoms associated with leucorrhoea out of 250 patients 73.33% patients complaint of low backache, 36% had vulval itching, 12.66% had pain in both legs, 38% had general weakness, 18% had loss of appetite and 19.33% patients had other symptoms like headache, giddiness, etc.

It was observed that 50% of women in study group had previous history of ligation done, 30% used intrauterine contraceptive device, and 20% were using oral contraceptive pill as contraceptive method.

Vaginal flora among study group showed that *Gardnerella vaginalis* was positive in 22% cases followed by 14% staphylococci, 4% *E.coli*, Diphtheroids 3.6%, streptococci in 3.2%, *Klebsiella* in 2.4%, *Micrococci* in 1.6%, *pseudomonas* in 2%, there was no growth in 2.4% cases. Incidence of candida was 24% and *Trichomonas* was 8.8%.

In control group the incidence of *G.vaginalis* was 44.4% and the *E.coli* which was 2.4% followed by coagulase negative staphylococci which was 1.2%. [Table 4].

**Table 1:** Age distribution (n=250)

Age (in years)	Study Group	%	Control Group	%
15-25	120	48	125	50
25-50	130	52	125	50
Total	250	100	250	100

**Table 2:** Colour, amount and consistency of the study group (n=250)

Amount	No of Patients	%	Colour	No of Patients	%	Consistency	No of Patients	%
Minimum	40	16	White	90	36	Thin mucoid	180	72
Moderate	130	52	Clear/gray	120	48	Thick curdy	50	20
copious	80	32	Greenish yellow	40	16	Frothy	20	8
total	250	100	Total	250	100	Total	250	100

**Table 3:** Leucorrhoea in association with odour, pruritis, dysuria and dysparunia

	Discharge	Study Group	%
Odour	With	70	28
	Without	180	72
Pruritis	With	86	34.4
	Without	164	65.6
Dysuria	With	90	36
	Without	160	64
Dysparunia	With	60	24
	Without	190	76

**Table 4:** Analysis of various organisms from study/ control groups (n=250)

Organism Isolated	Study Group	%	Control Group	%
Candida albicans	60	24	99	39.6
Gardnerella vaginalis	55	22	111	44.4
Other candida spp	30	12	5	2
Coagulase positive staphylococci	25	10	4	1.6
Coagulase negative staphylococci	10	4	3	1.2
Trichomonas vaginalis	22	8.8	5	2
Strptococci	8	3.2	0	0
Klebsiella spp	6	2.4	4	1.6
Escherichia coli	10	4	6	2.4
Pseudomonas	5	2	0	0
Micrococci	4	1.6	3	1.2
Diphtheroids	9	3.6	5	2
No growth	6	2.4	5	2

## 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 AJ [2] in their study and they consider vaginal discharge as one of the commonest reproductive health problem of women. Kulkarni RN [3] reported leucorrhoea in 27.47% women. Earlier studies [1,4] had reported lower prevalence of vaginal discharge. This might be because these studies were population based. The present study revealed that the disease has higher prevalence in reproductive period i.e. 25-50 years. In contrast to this Patel V et al [1,6] found higher percentage of vaginal discharge in younger age group, unmarried females and among working women. 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. In our study, 52% Muslims women had vaginal discharge. As in our study, other studies [3,5] 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. In our study, maximum incidence of vaginal discharge was noted in 70% of women who belongs to low socio economic and 30% of women belongs to middle socio economic group in study group. 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 al [1] in their study but the percentage of women suffering from these complaints were more in our study as compare to their study. In our study, 73.33% patients complaint of low backache, 36% had vulval

itching, 12.66% had pain in both legs, 38% had general weakness, 18% had loss of appetite and 19.33% patients had other symptoms like headache, giddiness, hair fall etc. In our study were similar to the study conducted in Goa by Tanksale et al [8].

As in our study, Kulkarni et al [3] 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 AK et al. [7] in their study also shows last delivery domiciliary or conducted by Dai and history of abortion to be significantly associated with reproductive infection, but a study conducted by Rathore M et al, [8] shows no association of place of delivery with reproductive tract infection.

In our study, Vaginal discharge was found to be more among those women who had adopted IUCD (30.0%) and sterilization (50 %) and minimum among the oral pill users (20%). In one study it was found to be more among women who had adopted sterilization and minimum among those using oral pills [9]. This is also applicable to 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 AJ [8] 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.

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. 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.

This is a preventable morbidity so community based approach should be adopted to educate women for proper hygiene maintenance and other factors.

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