

STUDY OF PREVALENCE OF VARIOUS DISORDERS AND PRESENTING COMPLAINTS IN PATIENTS OF VAGINAL DISCHARGE

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ABSTRACT

BACKGROUND

VD is considered as Abnormal Vaginal Discharge (AVD) when it is either a hypervaginal secretion not associated with menstruation or offensive/malodorous discharge or yellowish discharge. The various causes of AVD can be broadly divided into physiological and pathological.

AIMS

The aim of this study to know the various symptoms in patients of Vaginal Discharge. Study also aimed to know the prevalence of various aetiologies causing Vaginal Discharge.

SETTING AND DESIGN

Present study comprised of 150 patients attending STD clinic with complains of vaginal discharge.

METHODS AND MATERIALS

Detailed history of all patients, symptoms associated with them and h/o of spouse/partner. Appropriate tests were done to diagnose various infective aetiologies.

RESULTS

Pruritus (51.33%) was present as the most common complain followed by urinary complaints (37%). Bacterial vaginosis (42%) was seen in maximum patients followed by Vaginal candidiasis (24%).

CONCLUSION

Vaginal discharge is a common inherent complains in females. Because of their inherent biological vulnerability for RTI/STI all females must be screened periodically for the evidence of genital tract involvement, so that they can promptly and effectively treated. In time management of vaginal discharge not only prevents spread of disease, minimizes/prevents complications (Like PID, Female Infertility) 16, brings down the high expenses involved in treating them and possibly also the HIV transmission.

KEYWORDS

Vaginal Discharge, Presenting Complaints, Bacterial Vaginosis, Pruritus.

HOW TO CITE THIS ARTICLE: Kapoor B, Kapoor A, Shah S, et al. Study of prevalence of various disorders and presenting complaints in patients of vaginal discharge. J Evolution Med Dent Sci 2016;5(1):87-91, DOI: 10.14260/jemds/2016/20

INTRODUCTION

VD is considered as Abnormal Vaginal Discharge (AVD) when it is either a hypervaginal secretion not associated with menstruation or offensive/malodorous discharge or yellowish discharge.¹ The various causes of AVD can be broadly divided into physiological and pathological. Identifying its source can be challenging, because a large number of pathogens cause vaginal and cervical infection, and several infections may co-exist.²

Specific treatment for the vaginal discharge after identification of causative organism is time consuming, required skilled and well equipped laboratory set-up and costly, may not be possible in all set ups, so the treatment may be initiated based on clinical finding alone at times. Recently, careful definition of clinical syndromes and increased knowledge about the specific agents that cause genital infection in women have made more precise diagnosis possible.³

Present study was conducted in industrial population. The aim of this study to know the various symptoms in patients of Vaginal Discharge. Study also aimed to know the prevalence of various aetiologies causing Vaginal Discharge. General awareness about the STDs, condom usage, maintaining hygiene and tendency to seek quality STD health care is generally lacking, in this group, especially in women.

METHOD

Present study comprised of 150 women attending the STD clinic with chief complains of symptomatic vaginal discharge.

Financial or Other, Competing Interest: None.

Submission 16-12-2015, Peer Review 17-12-2015,

Acceptance 29-12-2015, Published 04-01-2016.

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DOI:10.14260/jemds/2016/20

Detailed history of all patients, including the H/o present and past illness, treatment taken, obstetric and menstrual history, history of contraceptive method used, personal history and hygiene, history regarding sexual behaviour, H/o spouse/partner having genital complaints/discharge were also taken and recorded.

After making the clinical diagnosis, appropriate tests for diagnosing candidiasis, trichomoniasis, gonorrhoea, chlamydia and bacterial vaginosis were done. Amsel's criteria was used for diagnosing Bacterial Vaginosis.

Women who were in menstrual phase or had received any treatment for discharge in preceding six weeks were not included in present study. Unmarried females and patients having discharge due to the gynaecological conditions such as fistulae, tumours, radiation effects, postoperative were also not included.

Local examination to see for any discharge, oedema, ulceration, erosion, growth or any other lesions and hygiene was done. Presence of any pain, tenderness or restricted cervical movement was also looked for. Warm water was used to provide sufficient lubrication for the speculum insertion in each patient.

The amount, source, color, consistency and odor of the vaginal discharge were noted. Cervical mobility was also noted. Swabs were subjected to following/various tests and slide preparations. Wet film (Amine/Whiff test) and 10% KOH preparation examined immediately under microscope. Gram stain, Tzanck smear and cultures were also done as and when indicated.

In case of VVC culture was only done when smear studies were negative and signs and symptoms were suggestive of VVC. Similarly N. gonorrhoeae were diagnosed on the basis of the gram stain of urethral and vaginal discharge. Demonstration of intracellular diplococci at least three pairs or more is strongly suggestive of the N gonorrhoeae.¹

Culture on Modified Thayer Martin media was done in required cases. Chlamydia trachomatis has iodine staining inclusions, their diagnosis was based on presence of these inclusion bodies. However, it is noted that swabs taken from the endocervix and patients having mucopurulent discharge were subjected to diagnosis of Chlamydia trachomatis,⁴ and N. gonorrhoeae.⁵

RESULTS

Youngest patient in the study was 19 yrs old and was diagnosed as Trichomoniasis and eldest patient, 52 yrs old was having candidiasis. Maximum patients were from 26-35 years age group. Table No. 1 shows that maximum no. patients in present study were having bacterial vaginosis (42%) followed by candidiasis (24%) and Trichomoniasis (10%). In Table No. 1 'Others' include 4 patients of non-specific vaginitis, where E. coli and Klebsiella were found on culture and 8 patients in which no organism was detected.

Patients presented with varying complaints in present study. Table No. 2 shows details of frequency of each complaint. Total of 4 patients of diabetes mellitus were seen in present study and all were having VVC. One patient aged 32 yrs was HIV positive, who had both VVC and TV. Another patient had history of recurrent abortions, was TORCH positive (IgG and IgM for HSV1 and 2) also had TV. Table No. 3 shows the comparison of symptoms in various disorders.

Maximum patients of VVC had good hygiene (83.33%). TV had most patients in poor hygiene (80.00%) category.

DISCUSSION

Present study of 150 patient unfolded several multifaceted factors which may be directly or indirectly involved in acquiring the disorders. Pruritus in present study was the commonest complaint was seen in 51.33% of the patients is comparable with studies of KJPS Puri et al.³ (49%) and V. Gupta.⁶ et al. (43.9%).

Lack of cleanliness, acidic discharge and diabetes could be the cause for pruritus in VD.⁷ Urinary complaint (Dysuria and frequency of micturition) in patients of vaginal discharge was 37% as seen by KJPS Puri et al.³ while in present study it was 31.99%. Backache was seen in present study in 6.66% of patients.

Causes of backache are many like uterine displacement/prolapse, endometriosis, osteoporosis, chronic pelvic infection, menstrual pain, in last weeks of pregnancy, postural back pain, trauma, sprain and strain, stress, lumbar disc disease, over exertion, age related, etc. In study by V. Gupta.⁶ et al. backache was seen in 59.9% of patients. V. Gupta.⁶ et al. observed lower abdominal Pain in 60.4% patients in contrast to 8.66% patients in present study.

This difference could be explained because of the lesser number of Chlamydia (3.3%) and gonorrhoea (8%), Trichomoniasis (10%) patients found in our study. These disorders can cause acute salpingitis.^{8,4,9} which presents with lower abdominal pain. Dyspareunia which was seen in 16.66% of patients in present study is comparable with that of by V. Gupta.⁶ et al. (15.1%).

Table No. 4 shows the comparison of Incidence of various causes of vaginal discharge in different studies. Present study showed a maximum incidence of Bacterial Vaginosis (42%).

This is in accordance with findings of KJPS Puri et al.³ (45%) and V. Gupta.⁶ et al. (44.6%). The incidence of bacterial vaginosis is also comparable to that of Mahadani et al.¹⁰ (44.30%), Kamara P et al.¹¹ (44.10%). Whiff test was positive in 47.6% and in microscopic result, CLUE cells were seen in the 82.5% of patients of Bacterial Vaginosis.

Results of study are comparable to study conducted on 661 randomly selected women attending a STD clinic.¹² where whiff test was positive in 43% and CLUE cells were seen in the 78.0% of patients. The principal benefits of diagnosing bacterial vaginosis is not only relief of symptoms of these conditions, thereby meeting a major expectation of clients, as well as the prevention of gynaecological.⁷ and obstetric complications.⁵ (And possibly HIV transmission) associated with bacterial vaginosis.

Incidence of VVC varied from findings of V. Gupta.⁶ et al. (9.3%) and Mahadani et al.¹⁰ (9.49%) to that of KJPS Puri et al.³ (31%) and Levett PN.¹³ (44%). In present study it was 24%. The incidence can also be comparable to that of Ries AJ.¹⁴ (20-25%) and Kamara P et al.¹¹ (30.7%). In study of V. Acharya et al.¹⁵ it was 18.863%.

Though the results of present study were not comparable to V. Gupta.⁶ et al. (9.3%), Fonck et al.¹⁶ (9.0%) and Mahadani et al.¹⁰ (9.49%), but all of them had VVC as most common infection after bacterial vaginosis. In VVC patients usually present with acute pruritus,¹ curdy, white,¹⁷ scanty to moderate,¹⁸ discharge. Similar was found in our study where

patients of VVC were having pruritus (86.11%), curdy (75%), white (86.11%) mild (83.33%) discharge.

Trichomoniasis was seen in 10% of patients in present study, which is in accordance with that V. Gupta.⁶ (7.9%), V. Acharya et al.¹⁵ (11.32%), Ries AJ.¹⁴ (10%) and Levett PN.¹³ (8.6%). The poor local hygienic condition, colonization of the Candida and anaemia helps in colonization and multiplication of *T. vaginalis*.¹⁹

Incidence of trichomoniasis has decreased in recent years. Natarajan et al.²⁰ observed a changing profile of vaginal Trichomoniasis by diminishing trend of acute symptoms and increasing trend of asymptomatic status.³

It was observed that increasingly wide use drugs like metronidazole for gynaecological and non-gynaecological indications should be contributing to this changing profile of trichomonal infection.³ Presenting complaints and character of VD in patients of trichomoniasis can be compared favourably with findings of Hiene P et al.²¹ (Pruritus (23-82%), malodour (50-75%), dysuria (30-50%), dyspareunia (10-50%).

Abdominal pain, described in up to 12% of women.^{22,23} may be because of severe vaginitis, regional lymphadenopathy, or conceivably endometritis or salpingitis due to *T. vaginalis* or another concurrent infection.⁹ Pain in abdomen was present in 13.33% of patients in our study.

The incidence of Gonorrhoea (8%) in our study is analogous with findings of V. Acharya et al.¹⁵ (8.93%), Fonck et al.¹⁶ (7.0%) and Alary M et al.²⁴ (5.7%). The incidence of Chlamydia in present study was 3.33% is comparable to the findings of Alary M et al.²⁴ (2.1%) and Costello Daly C.²⁵ et al (3.7%).

Diagnosis of Chlamydia was done clinically and on presence of inclusion bodies on swab from cervical smears. Mixed Infection was seen in 4.66% of patients in present study. Multiple organism in the same patient have been reported earlier also by Joshi et al.²⁶ Bandi et al.²⁷ in their respective studies. Non-specific vaginitis was seen in only 4 (2.66%) patients in present study.

After going through Table No. 6 it seems that incidence of most of disorders vary considerably. They differ from place to place, time to time, rural to urban, from one society to another and age group of the patient included in the study.

Following factors like Socioeconomic status, Diabetes Mellitus, sexual activity, personal hygiene, poor utilization of health services by young married women, methods of contraception used, co-existent infection also result in varied incidences of above disorders.

CONCLUSION

Because of their inherent biological vulnerability for RTI/STI all females must.²⁸ be screened periodically for the evidence of genital tract involvement so that they can promptly and effectively treated. Prevalence of these disorders is influenced by several multifaceted factors which may be directly or indirectly involved in acquiring the disorders.

Most of these women are young, indigent and faced with social challenges that often pose more of an immediate threat to their well-being.²⁸ A Good number of cases do not seek treatment either due to the fear of guilt or because they are asymptomatic.¹⁵

In time management of vaginal discharge not only prevents spread of disease, minimizes/prevents complications (Like PID, Female Infertility).¹⁵ brings down the high expenses involved in treating them and possibly also the HIV transmission.

Because of the relatively trivial nature of VD, cost and time factor, lack of specialized instruments and skilled man power, treatment may be initiated based on clinical finding alone at times. However, the common aetiological agents of vaginal discharge respond to specific therapies and their symptoms are sufficiently similar to render clinical diagnosis difficult. Therefore, laboratory investigations are appropriate.

SL. No.	Disorder	No. of pts.	Percentage
1.	Bacterial Vaginosis	63	42
2.	Vaginal Candidiasis	36	24
3	Trichomoniasis	15	10
4.	Gonococcal cervicitis	12	8
5	Chlamydial cervicitis	05	3.33
6.	Mixed infection	07	4.66
7.	Others	12	8.00
Total		150	100.00

Table 1: Prevalence of various Disorders causing Vaginal Discharge

No.	Symptoms	No.	Percentage
1.	Pruritus	77	51.33
2.	Mal odour	71	47.32
3.	Dysuria	31	20.66
4.	Dyspareunia	25	16.66
5.	Frequency of micturition	17	11.33
6.	Pain in lower abdomen	13	8.66
7.	Low backache	10	6.66
8.	Genital lesions	4	2.66

Table 2: Details of frequency of each complaint in total Pt. of Vaginal Discharge

DISORDER	VVC	TV	BV	GC	CC	MXD	OTH
n	n=36	n=15	n=63	n=12	n=5	n=7	n=12
Pruritus (n=77)	31 (86.11%)	11 (73.33%)	16 (25.39%)	2 (16.6%)	1 (20%)	7 (100%)	9 (75%)
Mal odour (n=71)	9 (25.00%)	10 (66.66%)	49 (77.77%)	-	-	2 (28.6%)	1 (8.3%)
Dysuria (n=31)	9 (25.00%)	7 (46.66%)	1 (1.57%)	10 (83.6%)	2 (40%)	1 (14.2%)	1 (8.3%)
Dyspareunia (n=25)	6 (16.66%)	7 (46.66%)	7 (11.11%)	3 (25.0%)	1 (20%)	1	-
Frequency of micturition (n=17)	7 (19.44%)	2 (13.33%)	1 (1.57%)	2 (16.6%)	1 (20%)	3 (42.8%)	1 (8.3%)
Pain in lower abd (n=13)	-	2 (13.33%)	6 (9.52%)	2	-	1 (14.2%)	3 (25%)
Low backache (n=10)	-	2 (13.33%)	4 (6.34%)	2	-	1 (14.2%)	1 (8.3%)
Cervical lesions (n=4)	-	1 (6.66%)	-	2	1	-	-

Table 3: Comparison of symptoms in various disorders

(MXD=MIXED; OTH=OTHERS WHICH INCLUDE NONSPECIFIC VAGINITIS AND GROUP WHERE NO ORGANISM COULD BE CULTURED. TV =VAGINITIS CAUSED BY TRICHOMONIAS)

Sl. No.	Study	BV	VVC	TV	GC	Others
1.	V Acharya. ¹⁵ et al.	24.90%	18.86%	11.32%	8.93%	32.71%
2.	V. Gupta. ⁶ et al.	44.6%	9.3%	7.9%	0	-
3.	Kamara P11 et al.	44.10%	30.7%	18%	-	-
4.	Fonck et al. ¹⁶	50%	9%	23%	7%	9 % Chlamydia, 22% HIV
5.	Costello Daly C. ²⁵ et al.	-	-	-	17.1%	3.7%,Chlamydia
6.	Alary M. ²⁴ et al.	-	-	-	5.7%	2.1%, Chlamydia
7.	KJPS Puri et al. ³	45%	31%	2%	3%	5%(NS)
8.	Mahadani et al. ¹⁰	44.30%	9.49%	16.45%	0.63%	12 %Cases (Senile)
9.	Ries AJ. ¹⁴	30-35%	20-25%	10%	-	15-20% Cases (Mixed)
10.	Levett PN. ¹³	28%	44.6%	8.6%	-	10% Cases (Mixed)
11.	Present Study	42%	24%	10%	8%	4.66% Cases (mixed)

Table 4: Incidence of various causes of vaginal discharge in different studies

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