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Original Research Article

Clinicomicrobiological spectrum of abnormal discharge from vagina in women in costal Andhra Pradesh

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ABSTRACT

Background: When there is change in colour, consistency, order and volume of discharge then it is called abnormal vaginal discharge and associated with vulvar pruritus, dyspareunia, dysuria and lower abdominal pain. There is variability in organism isolated and treatment used.

Methods: Sexually active women in reproductive age group with complain of abnormal vaginal discharge were included in this study based in following inclusion and exclusion criteria. . A detailed history of patient was taken regarding nature of discharge, colour, smell along with dysuria, dyspareunia, itching of vulva and lower abdominal pain.

Results: Out of 160 patients 88 patients have bacterial vaginosis. Trichomonas vaginitis was present in 7.5% patients. Candidiasis was present in 6.25% patients. Some patients were having more than one infection like Bacterial vaginosis and Trichomonas vaginitis was coexisting in 13.75%, Bacterial vaginosis + Candidiasis were present in 8.75% patients. Mixed infection was present in 8.75%.

Conclusions: From present study we can conclude that vaginal discharge is more common in married women in young age. Patients commonly presented with curdy white discharge, pruritus vulva and lower abdominal pain. Erythema and excoriation in vulva were common presentation, followed by erythema of vagina. Nature of discharge was mucopurulent in most patients. Bacterial vaginosis was most common followed by Trichomonas vaginitis.

Keywords: Clinical presentation, Microbiology, Vaginal discharge

INTRODUCTION

Abnormal vaginal discharge is one of the most common gynaecological problems in reproductive age group. Normal secretion of vagina consists of a mixture of secretion from various glands, vaginal epithelial cells which are desquamated and transudate from mucous membrane.¹ The nature of this secretion depends upon phase of menstruation cycle, hormonal status and oral contraceptive pills. When there is change in colour, consistency, order and volume of discharge then it is called abnormal vaginal discharge and associated with vulvar pruritus, dyspareunia, dysuria and lower abdominal pain.^{2,3} It is a cause of considerable discomfort to women and due to embarrassment the treatment used

to delay. This condition occurs mainly due to imbalance between normal vaginal flora and abnormal organism. *Candida* species, *Trichomonas vaginalis*, *Neisseria gonorrhoeae* and *Chlamydia trachomatis* are the organism which is responsible for abnormal vaginal discharge. Ectocervix, endocervix and the vagina is the common site for infection.^{4,5} In addition to these lactobacillus overgrowth syndrome is also responsible for abnormal vaginal discharge.⁶

Sivaranjini R, Jaisankar T, Thappa DM, et al has concluded in his study from south India that majority (26.25%) have bacterial vaginosis and (12.5%) were concurrently infected with trichomoniasis and BV.⁷ Gupta V, Gupta P, Chatterjee B, Bansal R et al has

concluded that Bacterial vaginosis was the commonest aetiology (43.6%), followed by candidiasis (10%), trichomoniasis (9.1%), senile vaginitis (5.4%) and vaginitis of unknown origin (5.4%).⁸ Patel V, Weiss HA, Mabey D, West B, D'Souza S, Patil V, et al has concluded that Endogenous infections were the most prevalent (24.9%) and BV was the most common infection.⁹

The most common infection among 319 women was bacterial vaginosis (26%) and the syndromic management of vaginal discharge among women seeking family planning and other reproductive health services should focus on vaginal infections.¹⁰

From literature survey it is clear that there is variability in organism isolated and treatment used.

Keeping these in view we have designed present study with an aim to know clinical presentation and microbiological spectrum of abnormal discharge from vagina in women in coastal Andhra Pradesh.

METHODS

Place and time of study

Present study has been conducted in the department of obstetrics and gynaecology Konaseema institute of medical science Amalapuram Andhra Pradesh India from January 2018 to September 2020.

Type of study-

This is a prospective observational study.

Selection of patients

Sexually active women in reproductive age group with complain of abnormal vaginal discharge were included in this study based in following inclusion and exclusion criteria.

Inclusion criteria

Age 18 to 45 years, Abnormal vaginal discharge as chief complain

Exclusion criteria

Bleeding per vagina, malignancy, pregnancy, post partum, postmenopausal, Post-hysterectomy patients and use of antimicrobial agent

Sample size

Based on previous study sample size was calculated to be 160.

Method

As per selection criteria 160 patients with complain of abnormal vaginal discharge attending gynaecology outpatient department were included in the study. A detailed history of patient was taken regarding nature of discharge, colour, smell along with dysuria, dyspareunia, itching of vulva and lower abdominal pain. After that speculum examination was done to know the nature, colour and measure the PH. Sterile cotton wool vaginal swabs was used to take high vaginal swab by rubbing and rotating in the posterior vaginal fornix. One swab was taken for wet mount and second swab was sent for microbiology for gram stain and culture. Bacterial vaginosis was diagnosed by gram stain, Trichomonas vaginalis was diagnosed by wet smear microscopy and Candidiasis was gram's stain. Syndromic-based management recommended by WHO was used for treatment.

Statistical analysis

Data were recorded in excel sheet and statistical Analysis was done with software SPSS-14 version. Data were calculated as percentage and proportions.

RESULTS

A total of 160 women with vaginal discharge were enrolled for this study as per exclusion and inclusion criteria. The mean age of women was 34.42+ 6.28 years most of them were married (94%) and belong to upper lower socio-economic group.

Table 1: Symptoms of patients presented with vaginal discharge.

Variables	Number (n=160)	Percentage
Pruritus vulva	82	50.61
Characteristic of discharge	Curdy white	98
	frothy	26
	Homogeneous green	28
Dysuria	76	47.5
Dyspareunia	43	26.87
Lower abdomen pain	88	55

Regarding symptoms of patients presented with vaginal discharge, 50.61% (82 patients out 160) patients were presented with pruritus vulva. Characteristic of discharge was different in different patients, Curdy discharge was present 61.25%, frothy discharge was present 16.25% and homogeneous charge was present in 17.5%. Dysuria was present in 47.5% patients. Dyspareunia was present in 27.87% patients and 55% patients were presented with lower abdominal pain.

Clinical finding was different in different patients. Regarding changes in vulva, 15 % patients have

excoriation and erythema was present in 10 % patients. Cervical changes were present 7.5%. Vaginal erythema were present in 10 % patients. Regarding nature of discharge it was excessive in 30% patients, with malodour in 18.75% patients and purulent in 45% patients.

Table 2: Clinical finding in patients with vaginal discharge.

Variables		Number (n=160)	Percentage
Changes in vulva	Excoriation	24	15
	erythema	16	10
Cervical changes		12	7.5
Vaginal erythema		16	10
Nature of discharge	Excessive	48	30
	malodour	30	18.75
	purulent	72	45

Table 3: Microbiological spectrum of patients with vaginal discharge.

Variables	Number (n=160)	Percentage
Bacterial vaginosis	88	55
Trichomonas vaginitis	12	7.5
Candidiasis	10	6.25
Bacterial vaginosis + Trichomonas vaginitis	22	13.75
Bacterial vaginosis + Candidiasis	14	8.75
Mixed	14	8.75

As per table 3, regarding microbiological spectrum of vaginal discharge out of 160 patients 88 patients have bacterial vaginosis. Trichomonas vaginitis was present in 7.5% patients. Candidiasis was present in 6.25% patients. Some patients were having more than one infection like Bacterial vaginosis and Trichomonas vaginitis was coexisting in 13.75%, Bacterial vaginosis + Candidiasis were present in 8.75% patients. Mixed infection was present in 8.75%.

DISCUSSION

In present study we have evaluated 160 patients with vaginal discharge, mean age of patients were 34.42 ± 6.28 years most of them were married (94%) and belong to upper lower socio-economic group which is supported by the work of) Sivarajini R, Jaisankar T, Thappa DM, et al.⁷ In present study 50.6% patients were presented with pruritus vulva. Vijayalakshmi D, Patil Sunil S, Sambarey Pradip has reported that vaginal pruritus was most common presentation in his study and it was present in 36% patients which partially support our study.¹¹ But our study is supported by Sharon L Hillier, Michele Austin et al.¹² In present study regarding characteristic of discharge, Curdy discharge was present 61.25%, frothy

discharge was present 16.25% and homogeneous charge was present in 17.5%. This is supported by the study of Venugopal S, Gopalan K, Devi A, Kavitha A et al.¹³

In our study lower abdominal pain was most common followed by dysuria and dyspareunia which corroborates with the study of Narayankhedkar A, Hodiwala A, Mane A et al and Saidu AD, Tunau KA, Panti AA, Nwobodo EI, Mohammed Y, Amin J, et al.^{14,15}

Regarding clinical finding in patients changes in vulva was most common clinical finding followed by vaginal erythema and cervical changes. In most of the patient the discharge was purulent and in 30 5 patients it was profuse. This is supported by the work of Koumans EH, Sternberg M et al and Carr PL, Felsenstein D, Friedman RH et al.^{16,17}

In our study bacteria vaginosis is most common followed by Trichomonas vaginitis and Candidiasis which is similar to the work of David A. Eschenbach, Sharon Hillier and Venugopal S, Gopalan K, Devi A, Kavitha A et al.^{13,18} Bacterial vaginosis and Trichomonas vaginitis was coexisting in 13.75%, Bacterial vaginosis + Candidiasis were present in 8.75% patients. Mixed infection was present in 8.75% this finding is supported by the work of T. N. Gandhi, M. G. Patel, and M. R. Jain et al and P. Madhivanan, K. Krupp, V. Chandrasekaran et al.^{19,20}

CONCLUSION

From present study we can conclude that vaginal discharge is more common in married women in young age. Patients commonly presented with curdy white discharge, pruritus vulva and lower abdominal pain. Erythema and excoriation in vulva were common presentation, followed by erythema of vagina. Nature of discharge was mucopurulent in most patients. Bacterial vaginosis was most common followed by Trichomonas vaginitis.

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Ethical approval: The study was approved by the Institutional Ethics Committee

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