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Original Research Paper

A STUDY ON CLINICAL AND MICROSCOPIC CORELATION OF VAGINAL DISCHARGE IN REPRODUCTIVE AGE GROUP OF WOMEN

Gynaecology

KEYWORDS: : Bacterial Vaginosis ,Trichomoniasis, Vulvovaginal Candidiasis

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ABSTRACT

Objective: To compare the clinical examination and microbiological examination of the vaginal discharge in women attending the Gynaecology OPD. **Methods:** This is an observational analytical study involving the clinical and micribiological examination of vaginal discharge in women attending the Gynaecology OPD at a teritiary care centre in Andhra Pradesh. **Results:** Young adult female of low socio economic class commonly presented with vaginal discharge. Bacterial Vaginosis is the commonest etiology both clinically as well as microbiologically followed by Vulvovaginal Candidiasis. **Conclusions:** In low resource settings thorough clinical and simple microscopical evaluation of the vaginal discharge aid us in diagnosing and treating the patients appropriately.

INTRODUCTION:

In health, the vagina has a mixed bacterial flora with unique bacterial community but dominated by Lactobacilli[1] .Many other microorganisms may be present in lower concentration including anaerobic, facultative anaerobic bacteria and Candida species[2] . The hormonal environment alters on a monthly basis with additional disturbances to the ecosystem produced by menstruation, hygiene practice and sexual activity. It can introduce a number of new species and pathogens as well as alter pH.[3]

A disturbance in the vaginal ecosystem is in which the Lactobacilli are replaced by an overgrowth of vaginal commensals. It is recognized by the most common cause of abnormal vaginal discharge in women of reproductive age group. Symptomatic vaginal discharge due to vaginitis is the frequent complaint encountered every other day both by Gynaecologists and General practitioners.[4] About 1- 14% of women in the reproductive age group suffer from vaginitis and it accounts for 5-10 million OPD visits per year all over the world. In India, among the females of reproductive age group its prevalence is estimated to be 30%.[5]

Successful management of symptomatic vaginal discharge lies in the diagnostic approach. In most situations, a presumptive diagnosis is made based on nature of discharge (clinical diagnosis), which is often incomplete. Thus, elimination of laboratory component (microbiological diagnosis) has led to treatment mismanagement, giving rise to over or under treatment, increase in recurrence rates, and increase in resistant strains of the etiological agents as well. Conventional approach for the diagnosis is through microbiological diagnosis of the etiological agent(s). This is vitally necessary for proper management of the condition. Appropriate therapy can then alleviate much of the suffering from vaginal symptoms and prevent complications from, and spread of, sexually transmitted diseases. [6]

The present study was conducted with the objective to study the clinical and microbiological profile of women presenting with complaint of vaginal discharge, to find out socio-demographic variables associated with the complaint of vaginal discharge and characteristic of discharge.

METHODOLOGY:

Study Type:

This is an observational analytical study

Study Setting:

The study conducted in the Department of Gynaecology & Obstetrics , ASRAMS Hospital,Eluru,Andhra Pradesh, from May 2015 to April 2016.

Sample size:

A total of 100 non- pregnant married women coming to Gynaecology OPD presenting with symptoms/signs of vaginal discharge were included in the study.

Inclusion Criteria

- Non pregnant sexually active women
- With symptoms/signs of vaginal discharge, white discharge with or without pruritus

Exclusion Criteria

- Pregnant females
- Postmenopausal women
- Vaginal discharge due to malignancies or due to fibroid polyp
- Women who had taken antibiotic treatment within last 2 wks

Selection of Subjects:

Women coming to Gynaecology OPD were inquired about their complaints. Women fulfilling the eligibility criteria were randomly selected from the list of eligible women. Women selected underwent the history taking, clinical examination and laboratory investigations.

Consent:

Informed consent was obtained from all women before inclusion. Those who denied consent were excluded from the study.

Data collection:

All the females were interviewd in depth about their presenting complaints, obstetric history & menstrual history,sexual history were noted.A provisional clinical diagnosis was made based on history ,the color , consistency,quantity and odorof the discharge and associated symptomatology. After inspection of vulva anterior and posterior (Sim's) vaginal speculum introduced, vagina & cervix visualized & the physical characteristics of discharge were noted for color, odour, pH, consistency & amount.

Three separate high vaginal swabs were taken from posterior fornix one for smear for Gram's staining and one for wet mount with normal saline and one for KOH test.Gram stain slide is evaluated by using Nugent score.

Bimanual examination was done to note fornicial tenderness or cervical motion tenderness to find out any evidence of PID.

The diagnostic criteria used for microbiological diagnosis are—

Bacterial vaginosis: Agram stain score of seven or more based on scoring system by Nugent et.al.Presence of clue cells on wet mount

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and positive whiff test.

Candidiasis: Gram positive budding yeasts and psuedohyphae on Gram stain and budding hyphae on KOH mount.

Trichomoniasis: Motile flagellated Trichomonads on wet mount.

RESULTS:

The present study was conducted to assess clinical and microscopic correlation of vaginal discharge among 100 women attending out patients department at ASRAMS Hospital.

Table 1: Age wise distribution of the cases

Age (years)	Cases	Percentage
15-20	13	13.0%
21-25	30	30.0%
26-30	20	20.0%
31-35	17	17.0%
36-40	5	5.0%
>40	15	15.0%
Total	100	100.0%

Above table shows age group wise distribution of cases. Highest cases were from 21 to 25 year age group category (30.0%) followed by 26 to 30 years (20%) and 31 to 35 years (17%).

Table 2: Socio-economic status wise distribution of the cases

Socio-economic status	Cases	Percentage
Upper SEC	5	5.0%
Middle SEC	39	39.0%
Lower SEC	56	56.0%
Total	100	100.0%

Above table shows Socio-economic status of study cases. Highest cases were from lower socio-economic class (56%) followed by middle SEC (39%).

Table 3: Clinical versus Microbiological diagnosis of the cases

Diagnosis	Clinical	Percentage	Microbiological	Percentage
Bacterial Vaginosis	37	37.0%	36	36.0%
Vulvovaginal Candidiasis	19	19.0%	20	20.0%
Trichomoniasis	5	5.0%	5	5.0%
Mixed Infections	20	20.0%	14	14.0%
Normal Discharge	19	19.0%	18	18.0%
Non-specific infection	0	0.0%	7	7.0%
Total	100	100.0%	100	100.0%

Above table shows comparison of Clinical diagnosis and Microbiological diagnosis of cases. In most of the cases clinical and microbiological diagnosis matched with each other. However clinical diagnosis tend to find out more mixed infections compared to microbiological diagnosis.

DISCUSSION:

The present study was conducted to assess clinical and microscopic correlation of vaginal discharge among 100 women attending out patients department at ASRAMS during May 2015 to April 2016.Following tables indicate observations of the study.

In the present study age group wise distribution of cases shows that highest cases were from 21 to 25 year age group category (30.0%) followed by 26 to 30 years (20%) and 31 to 35 years (17%). The following table indicates the maximum prevalence of vaginal infections among various age groups of various studies.

Studies	Commonest age group
EOK Nwankwo et al 20107	20-29
Sarah Hawkes et al 19998	28-32
Fang Xueqiang et al 20079	35-38
Khawaja T Mahmood et al 201110	25-34
Present study 2016	21-25

Present study indicated that highest cases were from lower socio-economic class (56%) followed by middle SEC (39%). As in our study Patel V et al , Kulkarni RN et al and Tiwari PV et al 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.

Study	Proportion of cases in Low Socio-economic class
Kulkarni RN et al 200511	60.5%
Patel V et al 200612	69.4%
Tiwari PV et al 201112	55%
Present 2016	56%

The present study shows that among the 100 women 81% had infection clinically while 19% had physiological leucorrhoea in absence of obvious pathology. 37% had Bacterial vaginosis, 19% had Vulvovaginal Candiasis, 5% had Trichomoniasis and 20% had mixed infection. In a study conducted by Fang, Zou, Yang (2007) in the rural area of Shandong province in China, the prevalence of BV, Trichomoniasis and Candidiasis were 6.6, 2.9 and 3.9% respectively. In another study performed in Hamedan province, Iran, conducted by Shobeiri et al (2006) the prevalence of Candidiasis, Trichomoniasis, and BV was 17.2, 18.1, and 28.5%, respectively.

In another study conducted by Sihavang et al (2007) among women referred to hospital in Vientiane, the capital of Laos, the prevalence of BV, Trichomoniasis and Candidiasis were 24.5, 3.7 and 39.5% respectively. In another study conducted by Oleveira et al (2007) in the rural area of Northeast Brazil, 20% of women had BV, 4.1% Trichomoniasis and 12.5% respectively.[80]

Study	Year	BV (%)	CANDIDA (%)	TV (%)
Fang, Zou, Yang[13]	2007	6.6	3.9	2.9
Sihavang et al[14]	2007	24.5	39.5	3.7
Bhalla et al[15]	2007	32.8	-	-
Oleveira et al[16]	2007	20	12.5	4.1
Jindal et al[17]	2007	-	23.4	-
Shobeiri et al[18]	2006	28.5	17.2	18.1
Demba et al[19]	2005	47.6	-	-
Braham et al[20]	2006	16.2	4.8	6.6
Haytham et al[21]	1999	-	21.5	15.5
Jumbo et al[22]	2004	-	29.1	-
Present study	2016	36	20.0	5.0

This variation might be methodology difference in isolation and identification of etiologies of vaginal infections. For instance, in this study culture method was not possible to identify BV. Moreover, environmental factors and difference on the actual study participants might also explain the above discrepancy. This variation also could be the difference in study participants as the present study included non-pregnant, symptomatic and asymptomatic women in reproductive age.

CONCLUSION:

From the present study following conclusion can be made:

1.Young adult female of lower socio-economic class are most commonly presented having vaginal discharge.

2. Most of the women having vaginal discharge have normal genital examination.

3. Bacterial vaginosis was the commonest etiology both clinically as well as microbiologically followed by Vulvovaginal Candidiasis.

4. Clinical and Microbiological findings match with each other in most of the cases.

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