



CODEN [USA]: IAJPB

ISSN: 2349-7750

**INDO AMERICAN JOURNAL OF  
PHARMACEUTICAL SCIENCES**<http://doi.org/10.5281/zenodo.1475288>Available online at: <http://www.iajps.com>

Research Article

**ASSOCIATION OF SOCIODEMOGRAPHIC FACTORS WITH  
ABNORMAL VAGINAL DISCHARGE, AMONG WOMEN WITH  
REPRODUCTIVE AGE GROUP****Dr. Gulfareen Haider<sup>1</sup>, Dr. Farhana Anjum<sup>2</sup>, DR. Ifat Balouch<sup>3</sup>**<sup>1</sup> MBBS, MCPS, FCPS, MS, Associated Professor, Department of OBS and Gynae,  
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Isra University Hospital Hyderabad<sup>3</sup> MBBS, FCPS consultant gynaecologist Department of OBS and Gynae, LUMHS**Abstract:**

**Objective:** To determine the sociodemographic factors responsible for abnormal vaginal discharge, among women with reproductive age group

**Materials and Method:** This cross sectional study was carried out in Gynae department of Isra University Hospital Hyderabad and LUMHS, from May 2016 to October 2016. All the reproductive age groups females with history vaginal discharge were enrolled in this study. Complete medical and sociodemographic history was done. The plain cotton material sterile vaginal swab was applied for High Vaginal Swab for all patients. The swab was rotated and rubbed within post vaginal fornix and sent to the laboratory for microscopic examination to evaluate the pathogens. After reports all the data was entered in the proforma.

**Results:** Total 94 women with abnormal vaginal discharge were studied, age groups of 26-36 years was the most common among 51.1% of the cases. Most of the cases 35.1% were matric passed, primary passed were 23.4% and graduate were only 12.8%, while 28.7% were illiterate. Most of the women 73.4% were multipara. Most of the women 85.1% were presented with foul smell vaginal discharge. History of unhygienic menstrual management was among 67.0% women. Majority of the cases 54.3% were found with poor socioeconomic status. 20.2% women had history of contraception.. Bacterial vaginosis and vaginal candidiasis were most common as 41.5% and 17.0% respectively. Trichomonas's vaginalis and mixed infection were found among 7.4% and 22.3% of women respectively.

**Conclusion:** It was concluded that, bacterial vaginosis and vaginal candidiasis commonest etiological types of abnormal vaginal discharge. Sociodemographic factors as; elevated age, illiteracy or lower level of education, multiparity, unhygienic management of menses, poor socioeconomic status and unhygienic previous deliveries were frequently found among women.

**Key Words:** Abnormal vaginal discharge, sociodemographic factors, reproductive age group.

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Please cite this article in press Gulfareen Haider et al., Association of Sociodemographic Factors with Abnormal Vaginal Discharge, Among Women with Reproductive Age Group., Indo Am. J. P. Sci, 2018; 05(10).

**INTRODUCTION:**

Atypical vaginal discharge is the frequent clinical challenge in sexually active females with several etiologies. Distinguishing its basis can be demanding since a great variety of pathogens cause several other infections may coexist [1]. Vaginal secretion is an amalgamation of bacteria, cells, and liquid which protects and lubricates the vagina. This mixture is produced constantly via the cervical and vaginal cells and it leaves the body via the opening of vagina. The quality, amount, and composition of discharge differ among individuals as well as through different phases of reproductive and sexual development [2]. Anomalous discharge can take place in several conditions, including imbalances and infections within pH or vaginal flora. Abnormal discharge of vagina can possibly as well not have any established cause. A study exploring females presenting to clinic with apprehensions regarding vaginal discharge or a vaginal foul smell, reported that 23% were found with vaginal candidiasis (yeast infection) and 34% were found with bacterial vaginosis,[3] 32% cases had sexually transmitted diseases including Trichomonas, Gonorrhoea, Chlamydia, or Genital Herpes[3]. It can be challenging to diagnose the factors of atypical vaginal discharge, although a KOH test or analysis of vaginal pH can possibly be applied. When atypical discharge takes place with itching, irritation, or burning on vulva, which is termed as vaginitis [4]. Vaginitis, either noninfectious or infectious, carries a commonest challenge in gynaecology, and is a major factor compelling the women to look for physician's advice, around 10,000,000 visits per annum [5-7]. Vaginal discharge is frequent clinical challenge with several etiologies. Formerly elusive terms like "non-specific vaginitis" were frequently applied to define conditions that produce vaginal discharge. In recent times, vigilant definitions of clinical syndromes and raised data regarding the explicit agents which result in genital infections among females have made possible a further precise diagnosis.<sup>1,8</sup> Vaginal infection with trichomoniasis, candidiasis and bacterial vaginosis are worldwide health challenge for females of reproductive years [9,10]. Bacterial vaginosis is distinguished via copious discharge and foul smell. Vaginal discharge represent a substantial challenge

for several females resulting in anxiety, discomfort affecting females' quality of life as well as consuming substantial resources [11]. Unluckily we have a quietness culture, therefore in majority of cases delay in looking for assistance. Pathological discharge can possibly be overlooked somewhere as usual physiological discharge [11]. Fresh evidence shows that correlation amid reproductive tract infection and vaginal discharge is weak [12]. So, the problem of vaginal discharge can be best understood not only in the biomedical perspective but also in the socio-cultural perspective, and there are no sufficient studies on this manner [12]. So this study has been led to assess the correlation of sociodemographic factors with abnormal vaginal discharge among women with reproductive age group.

**MATERIALS AND METHOD:**

This cross sectional study was led in Gynae department of Isra University Hospital Hyderabad and LUMHS. Study duration was 6 months from May 2016 to October 2016. Total 94 women who attended Gynae outpatient department, with history of vaginal discharge were enrolled in this study. All the women were selected with reproductive age group. All the postmenopausal and unmarried women, cases with known dermatological disease and not agree to participate in the study were excluded. Complete medical history and sociodemographic history including duration of vaginal discharge, socioeconomic status, education, parity, previous surgical history, marital status, history of contraception and occupational status were done. All the patients underwent culture assessment by cotton swab. The plain cotton wool sterile vaginal swab was applied for High Vaginal Swab for all patients. The swab was rotated and rubbed in post vaginal fornix and sent to the laboratory for microscopic examination to evaluate the pathogens. After reports entire data was filled in pre-planned proforma. Data analysis was done by SPSS version 20. Numerical variables were computed as mean and standard deviation. Frequency and percentage were computed for categorical variables. Stratification was done with respect to the sociodemographic factors. Chi-square test was used and p-value <0.05 was taken as significant.

**RESULTS:**

Overall 94 women with abnormal vaginal discharge were studied, age group of 26-36 years was the most common among 51.1% of the cases, followed by age group of 37-45 years and 15 to 25 years were found among 27.7% and 21.3% women respectively. Most of the cases 35.1% were matric passed, primary passed were 23.4% and graduate women were only 12.8%, while 28.7% women were illiterate. Almost all women were married and among them women 2.1% were divorced. Most of the women 73.4% were multipara. History of unhygienic menstrual management was among 67.0% of women. Majority of the cases 54.3% were found with poor socioeconomic, 27.7% had middle socioeconomic status and 18.1% had upper socioeconomic status.

20.2% women had history of contraception. 36.2% women had history of unhygienic previous delivery.

**Table. No.1**

Mostly women 85.1% were presented with foul smell vaginal discharge, additionally with other complaint as burning micturition, dyspareunia, vaginal itching, Pain in lower abdomen, rashes/soreness in vulva and others with percentage of 17.0%, 13.8%, 12.8%, 10.6%, 05.3% and 03.2% respectively. **Table. No.2**

Bacterial vaginosis and vaginal candidiasis were most common as 41.5% and 17.0% respectively. Normal physiological discharge was among 11.7% patients, Trichomonas's vaginalis was in 7.4% and mixed infection was among 22.3% women. **Table. No.2**

**Table 1. Sociodemographic characteristics of patients n=94**

Demographic characteristics	Frequency	%age
<b>Age groups</b>		
15-25 years	20	21.3
26-36 years	48	51.1
37-45 years	26	27.7
Total	94	100.0
<b>Educational status</b>		
Illiterate	27	28.7
Primary	22	23.4
Matric	33	35.1
Graduate	12	12.8
Total	94	100.0
<b>Marital status</b>		
Married	92	97.9
Divorced	02	2.1
Total	94	100.0
<b>Parity</b>		
Nulli para	10	10.6
Primipara	15	16.0
Multipara	69	73.4
Total	94	100.0
<b>Menstrual, management</b>		
Hygienic	31	33.0
Unhygienic	63	67.0
Total	94	100.0
<b>Socioeconomic status</b>		
Poor	51	54.3
Middle	26	27.7
Upper	17	18.1
Total	94	100.0
<b>History of contraception</b>		
Yes	19	20.2
No	75	79.8
Total	94	100.0
<b>History of unhygienic previous delivery</b>		
Yes	34	36.2
No	60	63.8
Total	94	100.0%

**Table. 2. Patients distribution according to clinical presentation n=94**

Clinical presentation	Frequency	%age
Foul smell vaginal discharge	80	85.1
Burning micturition	16	17.0
Dyspareunia	13	13.8
Vaginal itching	12	12.8
Pain in lower abdomen	10	10.6
Rashes / soreness in vulva	05	05.3
Others	03	03.2

**Table. 3. Etiological type of vaginal discharge n=94**

Clinical presentation	Frequency	%age
Bacterial vaginosis	39	41.5
Vaginal candidiasis	16	17.0
Normal physiological discharge	11	11.7
Trichomonas's vaginalis	07	07.4
Mixed infection	21	22.3
Total	94	100.0

**DISCUSSION:**

Early detection of pathological vaginal discharge is vital in preventing complications of core conditions that can severely compromise females' fertility, wellbeing and survival. In this study, the highest rate of vaginal infection was seen in 26-36 year age group i.e. 48(51.1%), followed by 26 (27.7%) in age group of 37-45 years and 20(21.3%) was found in 15-25 years and majority of women presenting with vaginal discharge i.e.69(73.4%) were multiparus. In comparison to our results, the topmost prevalence of vaginal infection in the study conducted by Mumtaz S et al<sup>5</sup> reported among sexually active, young women, at age groups of 31 – 40 years (39.5%). Though vaginal flora of adult women have lactobacilli contributing to maintain vaginal pH and to prevent potential pathogens' overgrowth, hence decreasing the infection rate in this age group. In another study of Chaudhury et al [20], the infection's

highest age was 25 - 34 years. In current study multiparous women were most common. Kulkarni et<sup>21</sup> al as well shows significant correlation of discharge with high parity.

As in our study, mostly patients i.e. 80(85.1%) presented with foul smell vaginal discharge followed by burning micturition seen in 16(17%), dyspareunia in 13(13.8%) and vaginal itching in 12(12.8%) patients. Patel V et al<sup>22</sup> exhibited comparable correlation within their study however the proportion of females experiencing these complaint were further within current study than above mentioned study. General incidence of vulval itching and lower abdominal pain within current study were comparable to a Goa' study of Tanksale et al.<sup>23</sup> Patient with vulvo-vaginal candidiasis present with curdy white discharge, burning, itching, vaginal or vulvar erythema, stinging on urination and painful intercourse. Bacterial vaginosis is distinguished via

fishy or musty vaginal smell and a white, thin vaginal watery discharge. Trichomoniasis patients generally complain of yellow green, profuse discharge and vulvar or vaginal irritation with complains of painful intercourse, itching, vaginal odour and painful urination.<sup>24</sup> Urinary tract infection (UTI) is the 2nd most common form of infection treated within clinics of primary care during 2000, firstly ever, it was reported that females undergoing bacterial vaginosis are at highest risk for UTI contrasted to others. Harmenali et al, [25] instituted an outstanding correlation between UTI and bacterial vaginosis. Likewise Hillebrand et al found that bacterial vaginosis during pregnancy raises the risk for UTI [26]. In current study no statistically significant correlation was found between bacterial vaginosis and dysuria.

Majority of patients i.e. 63(67%) who presented with vaginal infection were using unhygienic cloths during their menstrual cycle while only 31(33%) patients were using hygienic pads. Behavioural factor like menstrual hygiene or vaginal douching practices have been proposed as vital factor that might affect composition of vaginal flora [27] adolescent girls are susceptible, predominantly in India where adolescent girls are victimized in the society. Menstruation is yet considered as something unhygienic or unclean and the menstruation-associated reaction are subjected to knowledge and awareness regarding the subject. The way of a girl to learn regarding menstruation and its related modifications can possibly have an effect on her responsiveness to early menstruation. Even though menstruation are a natural process, it is associated to many practices and misconceptions, which occasionally cause adverse health consequences [10]. Furthermore, poor hygiene of a person and risky hygienic conditions has as well mainly led to gynecological challenges in teenage girls [11]. There has similarly been high incidence of reported infection-related cases because of poor hygiene in the course of menstruation [12, 13]. It was as well documented that reusing unhygienic napkins or the inappropriately dried cloth napkin prior to its reuse cause micro-organisms harbor resulting in vaginal infections.<sup>14</sup> Even though frequently not acknowledged, it is evident that measures to sufficiently report menstrual hygiene and administration will directly play a part in Millennium Development Goal-7 (MDG) on sustainability of environment. Moreover, because of its indirect influence on gender discrepancy and school

nonattendance, inadequate menstrual cleanliness and administration can possibly seriously obstruct the achievement of MDG-2 on universal education and MDG-3 on females' empowerment and gender equality [15].

In our study, 19(20.2%) patients presented with vaginal infection were using contraception. Alike outcomes are noticed in a study of Skajaa K et al<sup>16</sup>. Copper containing IUCD were most associated with risk of infection as compare to LNG-IUS, which use decreases the risk of infection.

In our study, commonest factor of vaginal discharge was bacterial vaginosis seen in 39(41.5%), followed by vaginal candidiasis seen in 16(17%), normal physiological discharge was 11(11.7%) and trichomonas vaginalis was in 7(7.4%) patients. In comparison to this, result of study conducted by Usha K et al<sup>27</sup> showed that 34% incidence of candidiasis, 14 % trichomoniasis, 2% normal physiological discharge, 2% gonorrhoea and 18% non-specific urogenital infection. Another study conducted by Habib et al<sup>28</sup> also reported that incidence of bacterial vaginosis among their vaginal discharge patients was 35.3 % and more common in women of 16-25 years of age. Vaginal discharge is the 2nd commonest gynecological challenge following menstrual disorders. A few females regard nearly any vaginal secretions as atypical discharge, and the initial job of a primary care physician is to make certain whether it is pathological or physiological. Though in strictly medical terms vaginitis is not a serious condition, it can possibly have effect on female's life. BV is associated with many complications which include post-operative infections after hysterectomy and post abortion pelvic inflammatory diseases. Bacterial vaginosis may lead to genital area shedding of HIV in HIV infected females and rise the females' risk of acquiring HIV and further sexually transmitted diseases from an infected partner. It as well raises the risk of UTIs contrasted to others [29].

#### CONCLUSION:

It was concluded that, bacterial vaginosis and vaginal candidiasis commonest etiological types of abnormal vaginal discharge. Sociodemographic factors as; illiteracy or lower level of education, multiparity, unhygienic management of menses, poor socioeconomic status, history contraceptive devices and unhygienic previous deliveries were frequently found among these women. Abnormal vaginal discharge had higher effects on women life and

relationship with their husbands. Awareness and management strategies should be developed to prevent the abnormal vaginal discharge to cure the women lifestyle.

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