



Original Article

Frequency of Abnormal Pap's Smears in Patients with Vaginal Discharge

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ABSTRACT

Cervix malignancy is one of the common types of cancer all across the globe. Among all the types of cancers in females, cervical cancers are the major cause of mortality. The detection and management of these types of cancers are necessary. One of the easiest tests is Pap's smear which is a rapid and painless screening test for detection of cervical dysplasia or cervical malignancy. **Objective:** To calculate the current magnitude and most frequent abnormal Pap's smear in the female population of Sindh, Pakistan, and to determine the frequency of abnormal Pap's smears in patients with vaginal discharge. **Methods:** It was descriptive cross-sectional research conducted for six months in department of Obstetrics & Gynecology Unit, Civil Hospital Karachi from November, 2017 to May, 2018. A total of 214 women with vaginal discharge were included in this study. Demographic variables and history of previous pelvic or abdominal surgery was recorded. All enrolled women underwent examination of cervix and cell sample was obtained with Ayr's spatula for pap's smear and evaluated. **Results:** The average age of the women was 34.86 years, frequency of abnormal pap's smears in patients with the vaginal discharge was observed in 4.67% (10/214) cases. Out of 10 cases, infection was observed in 8 women and 2 patients exhibited dysplasia. The frequency of abnormal Pap's smears in patients with vaginal discharge was found to be low but the complaint of vaginal discharge was very common. **Conclusions:** It was concluded that factor such as increasing age, low socioeconomic status and high parity were the contributory factors for the vaginal discharge. So, there must be raised awareness among females about their reproductive system and self-concern for their own health.

INTRODUCTION

Malignancy of the cervix also known as cervical cancer is the most common type of malignancies in females worldwide, and remains a leading cause of death due to cancer in the women of developing countries, affecting nearly 7.9% of all cancers in the females [1,2]. In developing countries nearly 70% a cancer is of cervical origin and is major cause of mortality in developing countries [3,4]. In Pakistan, cervical cancer ranks among fourth commonest malignancies and rising prevalence has been evident from various studies [3,5]. In the developed countries like United States, the frequency and incidence of cervical cancer is relatively low. This decline in invasive cervical cancer over the past few decades in the United States has been observed [6] but it is still a high risk for females in various developing countries. In developing countries, the trend of epidemiology has been accredited to mass screening with Papanicolaou tests (Pap test), which allows the detection

as well as the treatment and management of different pre-invasive diseases [7]. The etiologic role of human papillomavirus (HPV) infection has been investigated in cervical cancer which has led to the addition of HPV testing in the screening regimen of females with age of 30 years to 65 years [8]. However, females with definite symptoms, and abnormalities in initial screening test results, or who presented with a gross lesion of the cervix were recommended to be best investigated through colposcopy and biopsy [9]. According to the study, 10.2% of cases have been detected by Pap's smears [3]. Pap's smear is easy, rapid, and basically painless screening test for the detection of cervical dysplasia or cervical malignancy [3,5,10]. Since its advent, there has been a dramatic reduction in morbidity and mortality due to cervical malignancy worldwide. Cervical intraepithelial neoplasia is a curable disease if detected at early stage. Bal et al., have

found abnormal pap smears in 5% cases, atypical squamous cells of undetermined significance 0.3%, squamous intraepithelial lesion in 3.4% cases and invasive carcinoma in 1.3% [3]. Zaigham et al., have found 46% of women with abnormal transformation zone on screening for cervical neoplasia, of which 13% were found to have cervical cancer [11]. Lack of knowledge and decreased awareness regarding the role of Pap's smear has been seen in 70% of women of reproductive age. Another study by Noreen et al., in screening for precancerous lesions in Pap's smears found 3of .6% patients with dysplastic changes, 2.8% with CIN-1, 0.4% with CIN-11, 0.4% with CIN-III or severe dysplasia [12]. Numerous lesions like inflammatory, infectious and reactive lesions mimic pre-cancerous lesions that give rise to false-negative results hence a careful reporting is essential Bukhari et al., have found the frequency of normal pap smears in 50%, neoplastic in 10.2%, infective 38.3% and inadequate in 1.8% cases respectively [1]. Therefore, this research was designed to determine the frequency of abnormal Pap's smears to detect premalignant and malignant lesions or any abnormal smears in women attending OPD with the complaint of vaginal discharge. This will help to overcome morbidity and mortality by early detection of tumors in the pre-malignant stage and early management to prevent the progression of cervix disease.

METHODS

It was a descriptive cross-sectional study design conducted in the Department of Obstetrics & Gynecology Unit 1, a 60-bedded ward in Civil Hospital Karachi for the duration of the study six months from November 2017 to May 2018. Non-probability consecutive sampling technique was used to recruit the participants for the study. A total of 214 female patients were included in the study. The patients included in the study were females with an age range of 18 years to 60 years one or more of the complaints of recurrent vaginal discharge for greater than 4 weeks, married or unmarried, primiparous or multiparous. The patients were included in the study after getting written informed consent. The females with bleeding disorders like a history of hemophilia or platelet dysfunction or clotting dysfunction, complaints of post-coital bleeding and intermenstrual bleeding were excluded from the study. Patients were recruited according to the inclusion and exclusion criteria, the risks and benefits of the study were explained to them and after their informed consent, a detailed Performa was filled containing the information on demographic variables like, age, gender, admission number, and any history of previous pelvic or abdominal surgery was recorded. All women enrolled have a Pap's smear in which the first after history examination of the

cervix was carried out, taking a cell sample from the cervix with Ayr's spatula for analysis. Patients with abnormal smears were recommended for colposcopy for further evaluation. Data analysis was performed using IBM SPSS Version 20. Mean and standard deviation was computed for age. Abnormal Pap's smear parity, marital status, socioeconomic status, and husband living abroad was calculated by frequency and percentages effect modifiers like age. Marital status, husband living abroad, and socioeconomic status be controlled through stratification Chi-square test was applied by taking $p < 0.05$ as significant.

RESULTS

A total of 214 women presenting with vaginal discharge were included in this study. Most of the patients were below 40 years of age. The average age of the women was 34.86±8.90 years. Regarding parity status, 76(35.51%) were nulliparity and 138(64.49%) had multi-parity. All of the women were married including 26(21.15%) divorced and 28(13.08%) lived separated from their husbands. The socio-economic status of the women was observed to be low, 54(25.23%) women were not living with their husbands. The frequency of abnormal pap's smears in patients with the vaginal discharge was observed in 4.67% (10/214) cases. Out of 10 cases, infection was observed in 8 women and dysplasia was observed in 2 patients. Stratification analysis with respect to age, parity, marital status, living status with husband, and socioeconomic status was tabulated in table 1.

Age (Years)	Abnormal Pap's smear			Chi-square	p-value
	Yes	No	Total		
< 30	2(2.4%)	81(97.6%)	83	3.76	0.190
31-40	3(3.7%)	79(96.3%)	82		
42-50	4(11.1%)	32(88.9%)	36		
>50	1(7.7%)	12(92.3%)	13		
Parity					
Null Parity	1(1.3%)	75(98.7%)	76	2.98	0.084
Multi Parity	9(6.5%)	129(93.5%)	138		
Marital Status					
Married	6(3.8%)	154(96.3%)	160	7.38	0.025
Divorced	0(0)	26(100%)	26		
Separated	4(14.3%)	24(85.7%)	28		
Living with husband					
Yes	6(3.8%)	154(96.3%)	160	1.21	0.271
No	4(7.4%)	50(92.6%)	50		
Socioeconomic status					
Very low	7(8.6%)	74(91.4%)	81	4.99	0.082
Low	3(2.8%)	103(97.2%)	106		
Middle	0(0)	27(100%)	27		
n=214					

Table 1: Frequency of abnormal Pap's smear in patients with the vaginal discharge with age, parity, marital, socioeconomic, and living status

DISCUSSION

Vaginal discharge is a frequently occurring gynecological problem after menstrual disorders. Discharge of the vagina may arise from upper or lower genital parts or tract, which can be a type of normal physiological or abnormal pathological condition but its occurrence can be alarming for females [13]. Unfortunately, in the developing countries of the world, there is silent culture by females, resulting in delayed diagnosis as well as treatment. A pathological discharge is observed to be ignored by considering it as a normal physiological discharge, which may be abnormal in many fastidious women. Cervical cancer is one of the most common types of cancer among females and is the leading cause of mortality and morbidity in developing countries [14]. Cervical infections frequently occur at reproductive age in women and are linked with various serious clinical complaints leading to abnormal vaginal discharge [15]. There are observed several risk factors associated with cervical cancer and cervical intraepithelial neoplasia due to cervical infections [16,17]. This is due to the fact that abnormal or disturbed flora of the vagina can initiate producing carcinogenic nitrosamines leading to carcinogenesis so the screening of discharge is necessary. Pap smear is one of the screening tests accomplished by using cells of the uterine cervix [18,19]. The Pap test was introduced by George Papanicolaou and is known as the cervical screening test, with the advantages of its simple nature, quick to perform, and painless procedure. Thus this study was intended to determine the frequency of abnormal Pap's smears in patients with vaginal discharge, a total of 214 women, aged over 18-60 years, either married or unmarried irrespective of parity resenting with vaginal discharge were included in this study. Cervical cancer and recommended screening policy of it varies from country to country based on the age, intervals of screening, and the total number of scheduled screening examinations of pap smears. Pakistan is a developing country and there are no specified screening programs to carry out this test so cervical smears were carried out at the hospital by taking a sample from the females who visited the hospital. Regarding parity status, there were 76 (35.51%) nulliparity and 138 (64.49%) had multiparity. The present study, findings are in accordance with the results of Kulkarni et al., who also showed a significant relationship between the discharge with variable high parity [20], and these findings were in contrast to the study which was conducted in Goa concluding the insignificance association between high parity and discharge [21]. All women were married of which 26 (21.15%) divorced and 28 (13.08%) lived separated from their husbands which showed a significant impact of the vaginal discharge occurrence with the active sexual life, these results were in consistent with the results of

research [22]. Most of the patients included in this research belonged to the lower socioeconomic condition showing a higher frequency of vaginal discharge in comparison medium-income group, depicting that female belonging to the lower-income group have a higher frequency and prevalence of vaginal discharge. These results were supported by the studies [20,23] reporting more vaginal discharge among females belonging to relatively lower socioeconomic status. As the majority, 49.5% of the female population of the present research had low socioeconomic status and did not have any awareness about this health issue and were ignorant of the fact that this is a pathological problem and can be managed by consulting their physician and can be prevented by adopting safe sexual practices, to prevent abortion, early childbirth etc. This research also found that there was a high prevalence of vaginal discharge among women of 41 years to 50 years, multipara, and separated which was in contrast to the findings [21] who reported a relatively higher rate of vaginal discharge in the group of young and unmarried females, which might be because of the fact that young and unmarried female having the abnormal vaginal discharge were vigilant to report this issue to the hospital, as this research was confined to a hospital. The major causative factors associated with abnormal vaginal discharge were poor hygiene, unsafe abortion, and various sexually transmitted disease. The frequency of abnormal pap's smears in females in the present research was observed to be 4.67% (10/214), and 8 women showed infection out of those 10 cases, while dysplasia was observed in 2 female patients. Likewise, the frequency of dysplastic smears was in accordance with the results of research by Nausheen documenting 4.16% [24], and another reported 6.12% [25]. Similarly, the study by showed a frequency of 2.6%. Another study also reported inflammatory cytological patterns of cervical smear (53.33%), and squamous metaplasia (2.7%) respectively [27].

CONCLUSIONS

The frequency of abnormal Pap's smears in patients with vaginal discharge was found to be low but as the frequency of vaginal discharge was highly prevalent among females so this problem need to be considered. The research concluded that various factors leads towards the vaginal discharge such as increasing age, high parity low socioeconomic status, poor hygiene etc. which are the major contributory as well as risk factors which may lead to cervical malignancies if not managed properly. There is a need of creating awareness among the community about health care facilities so that the females can instills themselves in self-assessment and care for their own

health. Built-in service component and the factor of high confidentiality can lead to the improvement in self-reporting of various reproductive problems. That will allow overcoming the morbidity and mortality by early detection of tumor in premalignant stage and early management, therefore, can be done to prevent progression of the disease.

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