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Research Article

PREVALENCE OF CERVICAL CANCER AMONG THE WOMEN'S ATTENDING THE TERTIARY CARE CENTER OF EASTERN PART OF BIHAR

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ABSTRACT

Objectives: The objective of this study was to study the prevalence of cervical cancer and its grade in the patients presenting to the gynecology outpatient department (OPD) of a tertiary care center.

Methods: This is a record based cross-section study which shows the percentage of women having pathological cervical lesions from the total number presenting to gynecology OPD of our tertiary hospital with specific symptoms with in a period of more than past 2 year.

Results: As the catchment area is of lower status general health which was low and routine regular check-up was not considered important by the patients. Poor knowledge about cancer cervix and lack of regular screening at primary center's was the main constraint. The mean age of patient was 37±5.4 years and shows that maximum incidence that is reported is of negative for intraepithelial lesion for malignancy followed atypical squamous cells of undetermined significance and high-grade squamous intraepithelial lesion.

Discussion: The major limitation found in this study was lack of proper knowledge among patients, poor health-care facilities, and shortage of trained staffs. It is essential to upgrade the basic facilities of primary health-care centers and mass education to vulnerable age group and enhanced awareness on this issue will lead to early diagnosis and greater chance of screening leading to timely diagnosis and treatment.

Conclusion: Lack of awareness has led to underreporting and faulty health seeking behaviour has led to delayed diagnosis. Comprehensive approach and affordable extended package of health care under Ayushmann Bharat can be helpful in reducing the disease burden.

Keywords: Screening, Cancer cervix, Human papillomavirus, Pap smear, Programs.

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INTRODUCTION

Cervical cancer is the fourth leading causes of cancer in women globally with incidence of more than 6 lacs cases diagnosed and mortality of more than 50% in the year 2020. Approximately nine out of ten cases diagnosed are from low-/middle-income group countries [1]. In India, cervical cancer is the second most common cause of cancer among reproductive age group. In general, women of age 30–40 years are affected the most. Majority of cervical cancer incidence (95%) is associated with human papillomavirus (HPV) infection, strains like 16 and 18 is associated with 70% of cervical cancer incidence. Although HPV is the most common reproductive tract viral infection, it gets cleared with due course of time, in patients with poor hygiene or coinfection with other pathogens can be a triggering factor for cancer cervix occurrence along with other predisposing factors such as number of pregnancies, nutritional status, and smoking [2]. Prophylactic vaccination among girls of pre marriage age group of 9–15 years and routine screening by visual inspection can result in early detection of the lesion and help in lowering the prevalence [3]. India being the second populous country worldwide, with half of the female population visual inspection every 5 year is the most appropriate cost-effective strategy for screening [2]. These recommendations are very well incorporated in health system of developed countries but developing countries are way behind and commonly most of the people are not aware about its usefulness. As a result of which the mortality and morbidity rates have not reduced till date. Almost women of any age group never seek any help as they lack knowledge of cervical cancer hazard, poor medical services, illiteracy, or medical help is asked when the lesion advanced to higher stages and problem become out of proportion. Screening proposed is an essential component of national program for prevention of cancer, cardiovascular disease (CVD), and stroke (NPCDCS) under the holistic scheme of Ayushmann Bharat Scheme, but till date it is not fully functional [4]. Multiple traumas along with persistent HPV infection are associated with cancer cervix and screening for the same has resulted in the falling trend of the incidence. Cancer surveillance informatics must focus on collating the data and reporting it using electronic process, this data will guide for action and strengthening efforts in prevention and control of cancer, especially in rural areas. Patients' profile attending the clinics and service utilization of hospital services is also scarce in rural setting. Hence, synchronizing public health activities in accordance with the national program guidelines can lead to effective planning and implementation.

As per the guidelines issued by the WHO, regular HPV screening for cervical cancer that includes HPV DNA and HPV mRNA tests was encouraged. All high risks strains causing cervical cancers can be detected by HPV DNA testing and HPV mRNA test detects minor strains that cause cellular changes in cervical cells of transformation zone. Elimination by 2030 needs to speed up the vaccination coverage by HPV vaccine up to 90% by 15 years of age, up to 70% screening of women aged 35 repeated again by age of 45, and up to 90% of women receive treatment who were identified on screening [5]. This study's primary objective is to provide a relevant framework for accessing and predicting the impact of female reproductive tract cancer, status, and pattern in Bihta, Bihar.

METHODS

This is a record based secondary data analysis taken from hospital medical record department at NSMCH, Biota. The study analyzes the data from September 2020 to December 2022 (total period of 2 years and 3 month). This is a record-based data of 728 women who visited

the center and smear from suspected lesion was collected and send to pathology department for a histopathology and cytopathology examination. They had come with presenting complaints such as low-grade back pain, blood mixed serous/mucus discharge, whitish discharge per vagina, and not for regular check-up as suggested by the WHO. These women were mainly of the rural areas with low socioeconomic status and not aware of the importance of regular screening. Subsequently, they are advised for different tests including conventional Pap smear. On basis of the test results, they are either operated for confirmed lesions or if the result is inflammatory, they are prescribed antibiotic and asked for repeat evaluation. The specimen for cytopathological evaluation of suspected cases was processed at the pathology department of the hospital. Neoplastic lesions were classified according to the recent Bethesda classification. Based on the primary analysis, out of the total 728 cases, 444 (61%) were found to be negative for intraepithelial lesion for malignancy (NILM) whereas about 42 cases were reported as atrophic smear. Out of 728 cases 86 cases were reported as lesions having atypical changes such as high-grade squamous intraepithelial lesion (H-SIL) and atypical squamous cell suspicious for H-SIL (ASC-H). Most of the patients with chronic inflammatory pathology are nonmalignant only. The sociodemographic and clinical details obtained from the department records were age, residential address, sex, cytology, stage, and status of presentation. Complete history including complaints, personal, and marital history was noted. Material collected and smear made in the obstetrics and gynecology department and was send to the pathology department where it is stained by rapid pap method and reported according to the 2001 Bethesda system**.**

Statistical analysis

Data were analyzed using descriptive statistics and data presented in percentages. All the analyses were done using the Statistical Package for the Social Sciences program (IBM SPSS Statistics for Windows, version 16. Armonk, NY: IBM Corp.).

RESULTS

The Table 1 shows, among 728 women attending the pathology department, mean age of the women was 37±5.4. Among this, maximum patient attending the outpatient department (OPD) was in age group of 30–35 followed by 25–30, 35–40, and 20–25, respectively. While Table 2 shows Lesion-wise distribution as per Bethesda system shows maximum incidence that is reported is of NILM followed AS-CUS and H-SIL, lesser reported lesions are low-grade squamous intraepithelial lesion, followed by ASC-H and Atrophic smear.

Table 1: Age distribution of females attending the center

Age group (in years)	Frequency n (%) 728
20–25	99 (13.6)
25–30	135 (18.6)
30–35	143 (19.6)
35–40	122 (16.8)
40–45	61 (8.4)
45–50	54 (7.4)
50–55	27 (3.7)
55–60	47 6.5)
60–65	13 (1.8)
65–70	7 (0.9)
70–75	7 (0.9)
75–80	13 (1.8)
Total	728

Table 2: Frequency of the cytological abnormalities (Bethesda reporting system and updated WHO terminology) found in women attending the center

Cytologic interpretation	Frequency n (%)
NILM	444 (61)
ASC-US	132 (18)
LSIL	24 (3.3)
ASC-H	32 (4.4)
H-SIL	54 (7.4)
Atrophic smear	42 (5.8)
Total	728

Bethesda reporting system and updated WHO terminology, NILM: Negative for intraepithelial lesion for malignancy organisms and reactive cellular changes associated with inflammation and repair, LSIL: Low-grade squamous intraepithelial lesion, ASC-US: Atypical squamous cells of undetermined significance, ASC-H: Atypical squamous cell suspicious for HSIL, H-SIL: High-grade squamous intraepithelial lesion

DISCUSSION

The place of study caters the areas having low socioeconomic status mainly rural areas where primary health services are either non-functional or partially functional. Hence, patients with gynecological symptoms were not screened and treated properly. This non-functional screening mechanism results the patient generally reach to the institute gynecological OPD with chronic symptoms such as persistent lower backache, pain lower abdomen, and whitish or bloody discharge. The prevalence of well-differentiated carcinoma (H-SIL) is 7.4% which is quite high and alarming. The doubtful cases and the LSIL cases are regularly followed and screened for any precancerous changes occurring so that they do not develop carcinoma. While the symptoms presented in the younger age group, but poor health infrastructure leads to missed/improper screening. Hence, cervical carcinoma presents late when the problem become chronic or unbearable usually in the age group of 40–55 years and death reported mostly in the age group of 50–60 years globally. Incidence of cancer and death rates were more in the low resource countries. Hence, the only way to reduce the prevalence of cervical cancer among the women is to incorporate HPV vaccination in national immunization program and regular screening for HPV infection in frequently affected population. Upgraded health system helps in screening that leads to early diagnosis of the pre-cancerous lesions and timely intervention [6,7]. The HPV vaccine also protects for other subtypes of HPV that causes vaginal and vulvar cancers. In women <50 years, cervical cancer is the most common but in age 50 years or older, there is preponderance of uterine cancer. For primary prevention, access is the most important challenge that has been challenging till date [8]. Hence, by implementation of the WHO cervical cancer, estimation strategy estimated reduction in cancer mortality in 99 % in the subsequent century [9].

The incidence of invasive cervical cancer is 10/100,000. Most common type of cervical cancer usually reported are of squamous cell variant; however, adenocarcinomas, adenosquamous, and undifferentiated carcinomas and other rare histological types are also reported [10].

The natural history of the disease suggests that if regular screening be done in viable age group 30–40 years. This activity facilitates early diagnosis and treatment of high-grade precancerous lesions, that is, cervical intraepithelial neoplasia grade 2 and 3 and lowering the prevalence of invasive cancer [11].

Data from NFHS-5 are consensus with the WHO data, which shows 1.9% women (2.2% urban and 1.7% rural) had been screened for cervical cancer in India as compared to developed countries which are meager [12].

Poor infrastructure at rural setting and deficient trained staff at primary health-care facilities was the biggest barrier in the early screening and treatment of the pre-cancerous lesions leading to high prevalence. Maximum women were of low socioeconomic status; they are very much reluctant going to higher referral centers or tertiary care hospitals during their initial stages due to financial constraints. This limitation leads to loss of potential cases causing high surge in the incidence of cervical cancer mortality in Indian scenario [13].

A study conducted to establish baseline cervical cancer screening coverage in India, which reported only 29.8% of women reported

were being screened and that the prevalence of screening was higher in the urban areas [14]. It was also reported that the diagnosis of precancerous lesions or carcinoma cervix was usually an accidental opportunistic finding during regular screening or after the onset of the symptoms [15]. Long-term results can be seen if screening is followed as regular procedure in gynecology OPD [16].

CONCLUSION

Community education and sensitization toward female reproductive health is very important. Under the national program for prevention and control of cancer, diabetes, CVD, and stroke, proposed IEC activities are non-existing and population-based screening is also absent. Health promotion services to modify individual and community behavior is also absent. The mass education to vulnerable population and enhanced awareness on this issue will lead to early diagnosis and recognition of sign and symptom and greater chance of screening, leading to timely diagnosis and treatment. Empowering the people with correct diagnosis, dispelling myths, and female autonomy in the decision making will improve the condition. Delay in diagnosis due to socio cultural or socioeconomic factors led to underdiagnosis or missing the potential early lesions. Poor access to health services, lack of proper screening, role of family in health seeking behavior, lack of female autonomy, no time for self-care, unknown fear, lack of trust, social stigma, and fear of social rejection led to amplify the magnitude. Regular Pap smear screening should at least be included in the comprehensive package services in Ayushman Bharat Scheme through health and wellness center.

ETHICAL APPROVAL

Identity of the patient is not revealed, so ethical approval not taken, record based, and patient consent not required.

AUTHORS' CONTRIBUTIONS

Both the authors contributed in conceptualization, data interpretation, literature review, and manuscript writing.

CONFLICTS OF INTEREST

Nil.

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