A Retrospective Analysis of Presentation, Management, and Outcomes of Cervical Cancer in a Tertiary Care Center

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ABSTRACT

Background: The majority of women in Rural India have poor or no access to cervical cancer screening services although one-third of cases occur over there. The reduction in mortality through screening is due to an increase in the detection of invasive cancers at early stages and the detection and treatment of pre-invasive lesions which reduce the overall incidence of invasive cancers. The fundamental goal of cervical cancer is to prevent mortality and morbidity from cervical cancer. Approximately one-half of the cervical cancers in India are in women who were never screened. The current opportunistic approach to cervical cancer screening fails to reach subpopulations of women mainly living in low-resource regions, and thus, invasive cervical cancer is one among a complex diseases strongly linked to socioeconomic and geographic disparities.

Key words: Colposcopic screening, HPV infection, Screening of cervical cancer, Via villi

INTRODUCTION

Throughout the world, cervical cancer continues to a major health problem. At present, around 1 million women are diagnosed to have cervical cancer. Especially, in developing countries like India where the health resources are limited, cervical cancer ranks the second most common cancer (ICMR 2004). Squamous cell carcinomas were more common than adenocarcinomas.[1] High-quality screening with cytology has reduced mortality from squamous cell carcinoma, which comprises 70% of cases.[2] There are numerous risk factors for cervical cancer, which are early age of sexual intercourse, age at first childbirth, spacing between two children, literacy, poor genital hygiene multiple sexual partners, high parity, low socioeconomic class, cigarette smoking, and chronic immunosuppression.[3] Invasive cancer of the cervix is a preventable disease, as it has a long period of pre-invasive state, in which we have a lot of screening programs currently available and accessible. We can diagnose these lesions at the earliest, and we can treat these pre-invasive lesions effectively. Cervical cancer screening

has successfully decreased cervical cancer incidence and mortality. Due to these screening facilities, the incidence of cervical cancer is declining steadily. The inciting event in cervical dysplasia is essentially human papillomavirus (HPV) infection. HPV infection is the causative agent of both adeno and squamous cell carcinoma.[4,5] The most common variety is the squamous cell carcinoma. The clinical staging system by FIGO because of local invasiveness of this cancer is even though limited, the diagnosis and management protocols are based FIGO system followed throughout India. The American Cancer Society guidelines for the early detection of cervical cancer were updated in 2002 which recommend screening for women who aged 21–29 years, cytology every 3 years, women of 30–65 years who need HPV and cytology cotesting every 5 years, and women <21 years and >65 years who need not require screening. Indirect evidence indicate that the screening of cervical cancer must reduce the mortality by 90%. In the absence of screening, a 20-year-old woman has about a 250 in 10,000 m chance of developing invasive cancer during the rest of her life. The cervical cancer screening rates were lowest among the poor

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and less educated, and most of them are agricultural laborers. Screening at least every 3 years from 20 to 75 years of age will decrease the probabilities by about 215 in 10,000 and will increase 20 years' survival life of women.[5]

MATERIALS AND METHODS

This study describes the screening program used in KAPV Medical College, Trichy, and is based on visual inspection under acetic acid and Lugol's iodine (VIA VILLI) which is suitable for low-resource setting. The patients age, socioeconomic class, parity, contact history, vaccination history, age of first sexual intercourse, the presentation at the time of diagnosis, management, and outcomes[3] of patients are presented to KAPV Medical College for 1 year from December 2017 to November 2018. The information on risk factors was collected through personal interview. The factors identified are multiparity,[6] early age of first sexual intercourse, never having practiced vaginal douching, reusing home made feminine napkins, and male partner having a history more than one sexual partners.[7] All patients attending the gynaecology and NCD clinic were screened at KAPV Medical College for 1 year from December 2017 to November 2018. Few patients were referred from primary care centers throughout Trichy, and they were also included in the study. The positive cases, their referral pathway, stage of the disease, histological confirmation, and management were prospectively recorded and follow-up was done. Of 20,345 patients attended the gynaecology OPD, only 2723 patients attended the screening clinic. Hence, once 13% underwent cancer screening. The multilevel analysis indicates that women belonging to low socioeconomic status and residing in areas far away from the screening places have come with advanced stage disease.[8] Despite the launch of screening programs, the screening rated remains low and significant variation based on geographical regions exists.[9]

RESULTS

This patient Mrs.x, 28 years of age, P3L3 belonging to low socioeconomic class, age of first intercourse 15 years, has presented with stage IIB, and hence, Wertheim's hysterectomy was done and follow-up radiotherapy was given. From this

scenario, we might come to a conclusion that this patient would have screened at least 3 years back to be identified in pre-invasive stage that is at 25 years, which is lacking at our scenario.

From Table 1 we conclude that 37.8% cases occur in 50-60 years, 31% of cases occuring in 60-70years,23.6% of cases occuring in 40-50 years.

From Table 2, it is evident that 28% of cases screened for cervical cancer turned out to be positive.

This pie Chart 1 indicates that the incidence of cervical cancer in 20–30 years is 0.7%, 30–40 years is 7.14%, 40–50 years is 23.6%, 50–60 years is 37.85%, 60–70 years is 31%, and >70 years is 1.4%. Hence, the incidence of cervical cancer is more common in 40–70 years, but cases also have been reported in 20–30 years [Chart 2].

From Table 3, we infer that 90% of screened cases are negative for cervical cancer, 6.8% were identified at the
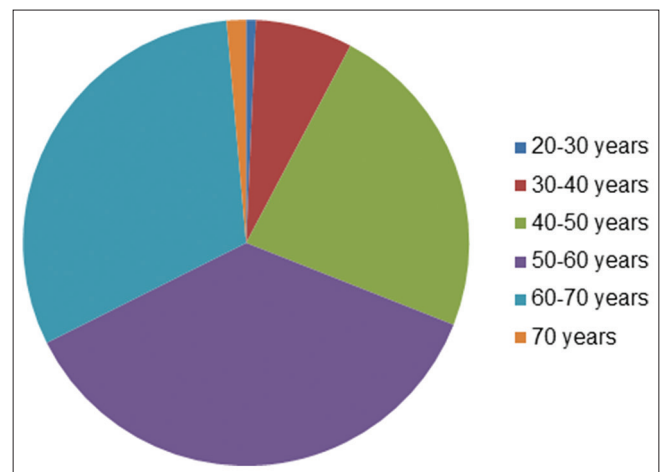

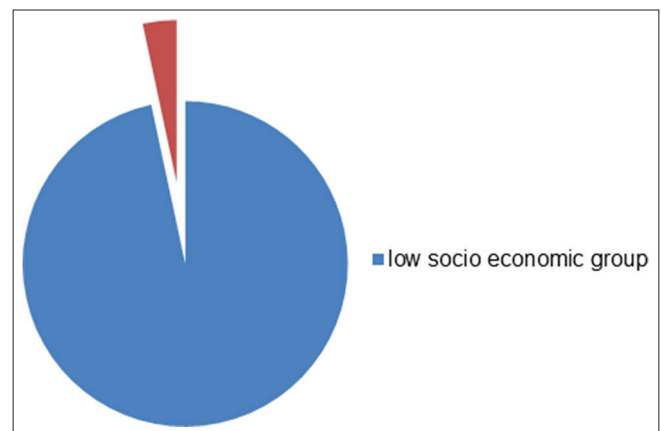**Chart 1:** The age-wise distribution of cervical cancer

Chart 2: The highest incidence of cervical cancer in low socioeconomic groups

Table 1: The age-wise distribution of cervical cancer	
Age group (years)	Number of cases (%)
20–30	1 (0.7)
30–40	10 (7.14)
40–50	33 (23.6)
50–60	52 (37.8)
60–70	43 (31)
>70	2 (1.4)

Table 2: The number of cases screened with VIAVILLI in KAPV Medical College, Trichy

Time period	Cases screened	Number of positive cases	Number cases biopsy taken
December 2017–November 2018	2723	771	769

Table 3: The distribution of cervical cancer in screened cases

Number of cases cytology done	CIN I	CIN II and III	Invasive carcinoma	Negative for cervical cancer
769	17	7	52	693

Table 4: The presentation of cervical cancer in screened and non-screened cases

Screened cases with carcinoma *in situ*	Screened cases with invasive cancer	Non-screened cases directly presented with invasive cancer	Total cases from December 2017 to November 2018
24	52	64	140

Table 5: The management protocol followed in cancer detected cases

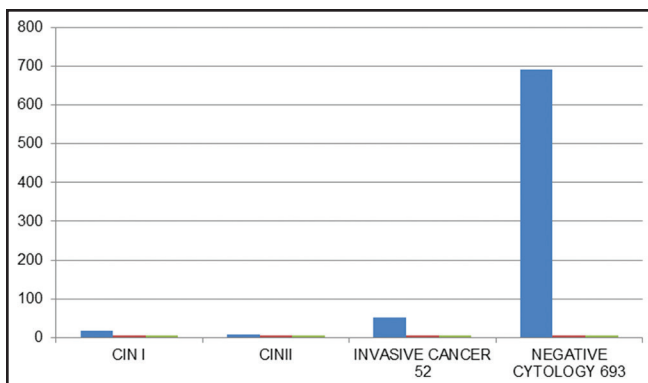| Cryotherapy	Radical hysterectomy	Radiotherapy and chemotherapy	Number of cases expired during follow-up
17	13	110	3

Chart 3: The stage of cervical cancer identified during screening
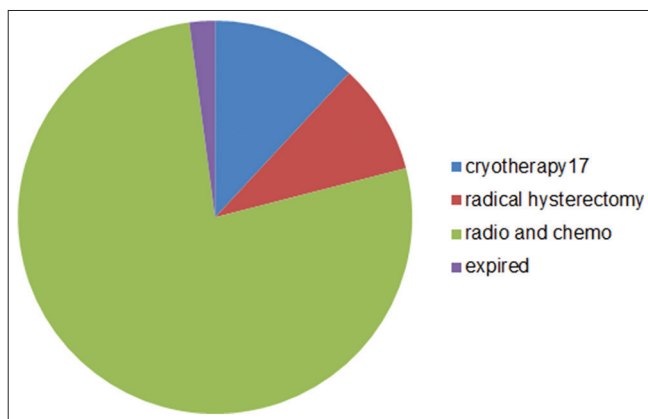

Chart 4: Managent of cases of cervical cancer Chart 4 indicates the management of cervical cancer patients at KAPV Medical College

invasive stage, and only 3% were identified as carcinoma *in situ* stage. This represents that most of the cases are presenting at very late stage even for screening programs [Chart 3].

Table 4 shows that 54% of screened cases and 46% of non-screened cases presented with different stages of cervical cancer and the non-screened cases presented with advanced stage disease.

From Table 5 and Chart 4, we infer that most of the cases presented at inoperable stage, and palliation w the treatment of choice. 12.1% underwent cryotherapy, 9.2% underwent radical hysterectomy as the treatment of choice, and 78.5% diagnosed at inoperable stage and underwent palliative chemotherapy and radiotherapy.

CONCLUSION

The incidence of cervical cancer in patients attending gynaecology OPD is 0.7%. The incidence of invasive cancer among screened individuals is 6.7% and the incidence of pre-invasive cancer is 3%. Hence, we conclude that 54% of cases were diagnosed through screening procedures, and only 17% of cases were diagnosed at the pre-invasive stage.

Patients presenting with cervical cancer to KAPV Medica college are with late-stage disease. The screening was low despite the access to screening programs. The lack of awareness, being unnecessary fear, anxiety and hesitation to get screened are the primary causes of it.[10] This reveals a

lack of appreciation of the disease and the failure of health system to effectively disseminate information. Fear and anxiety are due to poor understanding of the principle behind cervical screening. Hence Screening has to be made more rigorous and more number of cases to be covered to detect cancer at pre-invasive stage. Screening has to be started at the earliest within 3 years of initiating the sexual activity. Improving awareness of cervical cancer in the community should be emphazised for better recognition and management within the healthcare services.[4]

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