Original Research Article

Delays in reporting of cancer cervix in rural India: sociodemographic and reproductive correlation

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ABSTRACT

Background: Cervical cancer, caused by sexually-acquired infection with human papillomavirus (HPV), continues to be a public health problem worldwide as it claims the lives of more than 270,000 women every year. The majority of cervical cancer deaths (85%) occur in women living in low- and middle-income countries. Assessment of socio-demographic profile and reproductive history gives a better picture of the determinants of cervical carcinoma in low-resource settings.
Methods: This hospital-based cross-sectional study was undertaken at a Regional Cancer Institute at Aurangabad, India. Hundred newly diagnosed women with advanced cervical cancer (stage 2B-4B), who were undertaking radiotherapy and/or chemotherapy, were included to assess their socio-demographic, reproductive and clinical profile. The causes for late presentations were also noted.
Results: The mean age of women at the time of detection of cervical cancer was 57.35 years (30-82 years). More than 81% of patients were illiterate and belonged to low socioeconomic status. 47% of the study subjects had their first sexual experience before 15 years of age. Nearly 78% women had 5 or more pregnancies, among them, unusual discharge from vagina (39%) followed by bleeding after menopause (28%) and pain in abdomen (13%) were the most common presenting complaints. The average duration of symptoms was (28 days), time interval between the symptoms and biopsy was (3.6 months). Combination of radiotherapy and chemotherapy was the most common modality of treatment. Most common cause of delay in diagnosis was lack of awareness about the symptom of cancer (11%), feeling ashamed (10%), no one paid attention (19%), not diagnosed and referred at periphery and financial causes (23%) were found.
Conclusions: Prevention of cervical cancer include delaying the age at initiation of sexual activity to above 18 years, spreading cancer awareness in women and with well-equipped health workers with diagnosis and knowledge of cancer cervix. This can prevent the medical and patient delay in the diagnosis of cancer cervix.

Keywords: Cancer cervix, Causes of delay, Social-demography

INTRODUCTION

Cervical cancer is the most common cancer in developing countries and the sixth most common in developed countries. In all areas, it is more frequent among women of low socioeconomic status, early age at first sexual intercourse, illiteracy and high parity.[1] The late presentation of cancer cervix cases makes both the morbidity and mortality associated with the disease at a rise. In 2012, 5,28,000 new cases of cervical cancer were

diagnosed, and 2,66,000 women died of the disease, nearly 90% of them in low- to middle-income countries. Without urgent attention, deaths due to cervical cancer are projected to rise by almost 25% over the next 10 years. Over the past three decades, cervical cancer rates have fallen in most of the developed world, largely as a result of screening and treatment programmes. In contrast, rates in most developing countries have risen or remained unchanged. The rural and poorer women are at greatest risk of acquiring the disease.[2]

Even in a state like Maharashtra, where MMR is comparable with states like Kerala, it is unfortunate that the incidence and mortality associated with cancer cervix is very high and alarming. Thus, an attempt was made to identify the causes of delay in presentation in case of cancer cervix. The aim of the study was to identify the sociodemographic, reproductive and clinical factors in cases of cancer cervix and to find out the causes of delayed presentation. Attempt was also made to find out the time interval in symptoms and biopsy in these cases.

METHODS

A Cross sectional observational study was designed to evaluate the role of the socio-demographic factors, reproductive history, clinical features and the causes of delayed presentation of cancer cervix cases in the Department of Gynaecology-Oncology, GMCH, Aurangabad from August 2016 to July 2017. All women diagnosed with carcinoma cervix by histopathology report and consenting to be a part of the study were evaluated thoroughly and a questionnaire was given. Details about age, parity, education, age at marriage, age of first delivery, symptoms of cancer cervix, interval of symptoms, time interval between symptoms and visit to doctor and time interval between symptoms and biopsy taken were noted. The cause for delayed presentation was noted.

Recurrence cases and metastasis due to any other malignancy in the body were excluded.

Ethical clearance was taken. Variables analysed were the sociodemographic details, literacy level, symptoms, duration and stage of the disease at diagnosis, delay in presentation and the causes of the same were noted.

Results were expressed as means and percentages, and statistical significance was calculated using software Epiinfo.

RESULTS

Hundred Cases of cancer cervix who presented at Outpatient Department of Gynaecology Oncology at Government cancer hospital, Aurangabad were interviewed by giving a predesigned questionnaire. The results were noted.

Table 1 shows sociodemographic characteristics. The mean age of women at the time of detection of cervical cancer was 57.35 years (30-82 years). More than 81% of patients were illiterate and belonged to low socioeconomic status. Present study shows that the mean age of cancer cervix is 57.35 years, ranging from 30 to 82years. Advanced stage III A of the disease and the higher age group was a frequent finding. 81% were illiterate and 15% had primary level of education. Seventy one percent patients were from below poverty line. Seventy eight percent patients were from rural area while 12% patients were residing in urban area. Seventy percent patients belonged to Hindu religion, while 20 to Buddhism and 8 belonged to Muslim religion that is related to religious customs like circumcision and genital hygiene practices.

Table 1: Social demographic features of women having cancer cervix.

Variables		Percentage (%)	Number
Age	30-39	9%	9
	40-49	26%	26
	50-59	21%	21
	60-69	32%	32
	70-79	11%	11
	>79	1%	1
	Total	100%	100
Social status	BPL	71%	71
	Non-BPL (APL)	29%	29
Education	Illiterate	81%	81
	Primary	15%	15
	Secondary	4%	4
Residential	Urban	22%	22
	Rural	78%	78
Religion	Hindu	70%	70
	Muslim	8%	8
	Christianity	0%	0
	Buddhism	20%	20
	Jainism	2%	2
	Total	100%	100

*Mean age of the patients is 57.35years (30-82 years) 81% patients were illiterate and majority were from rural area

Table 2 shows that 47% of the study subjects had their first sexual experience before 15 years of age. Surprisingly youngest age at marriage was 8 years. Fifteen percent of study subjects were married before 11 years of age, 32% between 11-15 years of age and 34% between 15-16 years of age. Only 19% study subjects were married between 17-19 years of age. Table 3 shows 78% women had 5 or more pregnancies. Only one study subject was nulliparous. Highest parity was para 12. Parity 1 and 2 combined to only 10 % of total study subjects. Maximum study subjects(32%) were para 3 with mean parity of 4.

Table 4 shows among the study subjects, unusual discharge from vagina (39%), followed by bleeding and discharge (28%) and pain in abdomen (13%) were the most common presenting complaints. Postcoital bleeding complaint was in 7% of the study subjects, while low backache and urinary symptoms were seen in 5% of the study subjects.

Table 2: Distribution of patients according to age at marriage.

Age at marriage	No.	Percentage (%)
<11 years	15	15%
11-14 years	32	32%
15-16 years	34	34%
17-19 years	13	13%
>19 years	6	6%
Total	100	100%

The youngest was 8 yrs old and the mean age of marriage was 15 years.

Table 3: Distribution of the patients according to parity.

Parity	No.	Percentage (%)
Nullipara	1	1%
Para 1	3	3%
Para 2	7	7%
Para 3	32	32%
Para 4	22	22%
Para 5	13	13%
Para 6	11	11%
Para 7	7	8%
Para 8	2	2%
Para 12	1	1%
Total	100	100%

*Mean parity was 4

Table 4: Distribution of symptoms in women with carcinoma of cervix.

Symptoms	No. of women	Percentage (%)
Bleeding per vaginum	25	25%
Abnormal white discharge	39	39%
Bleeding and discharge	28	28%
Pain in abdomen	13	13%
Low backache	5	5%
Urinary complaints	5	5%
Lump in abdomen	0	0
Post coital bleeding	7	7%
Others	3	3%

*one patient had more than one symptoms. Majority of them presented with bleeding per vaginum.

Table 5 shows the time interval between symptoms and doctor's consultation. Average time interval to visit to doctor was 28 days with range of 1 day to 2 years. Thirteen percent study subjects were consulted within 8 days of notifying symptoms, while 35% study subjects

visited doctor between 8-15 days and 25% subjects within 1-6 months of symptoms notification. Table 6 shows time interval between onset of symptoms and definitive diagnostic procedure i.e. cervical biopsy. Only two percent study subjects had their cervical biopsy procedure done within 8 days of onset of symptoms and 47% of study subjects had time interval of 1-3 months, whereas 15% study subjects had undergone cervical biopsy after 1 year of onset of symptoms.

Table 5: Interval between symptoms and visits to doctor.

Time period	No.	Percentage (%)
<8 days	13	13%
8-15 days	35	35%
15-30 days	23	23%
1-6 months	25	25%
>6 months	4	4%

*Average is 28 days. (1day-2 years): the time interval to go to a doctor

Table 6: Table showing time interval between onset of symptoms and biopsy.

Time period	No.	Percentage (%)
<8 days	2	2%
8-15 days	8	8%
15-30 days	7	7%
1-3 months	47	47%
3-6 months	14	14%
>6 months	7	7%
>1 year	15	15%

*Average interval is 3.6 months. (5 days-1.5years): time interval from symptoms to diagnosis

Table 7 shows different causes of delay in late reporting of the patient to health care facility. As the present study includes 78% study subjects from rural area, financial cause (23%) was commonest cause for delay in reporting to health care facility and followed by not diagnosed by local general practiioners (22%).

Table 7: Causes of delay in late reporting of the patient to health care facility.

Causes of delay	No.	Percentage
No delay	1	1%
Financial problem	23	23%
Decision making	17	17%
Nobody paid attention	19	19%
Ashamed	10	10%
Family problem	19	19%
Not aware of symptoms of CA Cx	11	11%
Others	3	3%
Not diagnosed by local general practitioners	22	22%

*Most of them had multiple causes for delay in reporting to the health facility, average (3.5 months).

Decision making and nobody paid attention relates to gender inequality and accounts for 17% and 19% study subjects who reported late to health care facility. Family problems accounted for 10% study subjects, while ashamed of telling symptoms and to consult health care facility accounted in 19% of study subjects.

Eleven percent of study subjects were not aware of symptoms of cancer cervix. That was the reason for reporting late. In others causes (3%), death of daughter or close relative were the cause for delay in consultation to health care facility.

DISCUSSION

Most women who die from cervical cancer, particularly in developing countries, are in the prime of their lives. They may be raising children, caring for their families and contributing to the social and economic lives of their towns and villages. A woman's death is both a personal tragedy and a sad and unnecessary loss to her family and her community, with enormous repercussions for the welfare of both. These deaths are unnecessary because there is compelling evidence that cervical cancer is one of the most preventable and treatable forms of cancer if it is detected early and managed effectively.

Present study shows that the mean age of cancer cervix is 57.35 years ranging from 30 to 82years.

The youngest patient was 30 years and the oldest was 82 years of age. Advance stage III A of the disease and the higher age group was a frequent finding. 81% were illiterate and 15% had primary level of education. It was observed that low level of education and late diagnosis go hand in hand together. Similar results are found in the studies by Rai A, Pradhan S et al.[3] They found out that less education was associated with a certain lifestyle and late medical assistance. We agree with the same. (Table 1)

Most of them were from 78% from rural areas. Long distance from the health facility and unavailability of health resources were the main causes for delay in diagnosis in this study. We also found out that women only went to medical faculties if the health problem is causing severe distress. This is also observed by Das and Patro, who state that economic constrains prioritizes women towards financial and social responsibilities with self-neglect towards their health issue by curtailing the expenses in visiting far off health centres.[4] We agree to the above fact in the present study.

Forty seven percent women were married before the age of 15 years. Surprisingly the earliest marriage was at the age of 8 years. The early marriages imply early onset sexual activity and early childbirth. This is one of the causative factors in cancer cervix. This is also mentioned in Li S et al, who emphasis on the fact that early marriages, low education along with low socioeconomic

status and malnutrition adds to the causative factors in this disease.[5] We also had similar findings in the present study. Thus, the social disadvantage associated with their social status limited access to the health system. Early age of marriage and low socioeconomic status also show a correlation between late presentation and advance stage of cancer. Thus, the strong association between low socioeconomic status, low education level, early marriages and advanced stage of cervical cancer can be well established.[6] This are the causes of social delay (Table 2).

Ninety five percent were married and 5 women were widows or left by husband. The married status, widow or left by husband also added to the late diagnosis and late referral emphasing on the social status of women in India. Married women seem to enjoy the comforts of emotional support, financial security and somebody to take care of them, which is not seen in widows and left by husband group of women Widows were diagnosed very late as there was no one to take care of them. Similarly left by husband and HIV positive women were also found to report late. The married women who reported in advanced stage of the disease attributed it to inability for decision making, being ashamed and family problems.[6] Lack of human resources was also one of the contributory reasons

It is mandatory for the ART Programme to screen out positive women for cervical malignancy at regular intervals. The findings speak volumes about the ongoing government programmes.

The mean parity was para 4 whereas the lowest was 1 and the highest was 12. A positive correlation was found in the high parity and advance stage of cancer cervix(Table 3).[7]

This study shows that the patient characteristics like widow, dependent, HIV positive and low education level along with rural residence affect the prolonged diagnostic intervals and hence the advanced stage of the diseased stage of cancer cervix. This can be explained by the well-established fact of low social status of women and cancer cervix. This is in agreement with Bhurqui Y, Kumar H and Rajarao P et al.[8,9] These factors contributed to the patient delay.

The most common symptoms were bleeding per vaginum, white discharge per vaginum and pain in lower abdomen. The intermenstrual bleeding, postcoital bleeding and post-menopausal bleeding were taken very casually by the patient as it was thought to be non-serious. The postmenopausal bleeding received the promptest attention whereas the white discharge per vaginum was taken very casually and neglected. Thirteen women reported only there was pain or foul-smelling discharge. Backache, abdominal discomfort and other nonspecific complaints were often neglected till the

women landed in serious complication like uremia or renal failure (Table 4).

The patients who presented late initially mistook the symptoms of cancer cervix as either symptoms of STD and were scared to report. Some patients didn't take the symptoms seriously and neglected themselves, while some mistook the symptoms as AUB which is age related. Patients reported, that they thought that the spotting and bleeding p/v are due to hypothyroidism and some attributed it to nonrecognition of symptom seriousness. Thus, awareness regarding the symptoms of cancer cervix go a long way in the late diagnosis and advance stage disease.

Old women who are dependent on other family members are grossly neglected in the health issues. This was reported as nobody paid any attention in our study (19%) (Table 7). The average delay was found to be 3.5 months (range was 1 day to 1.5 years).

Apart from the above factors, long distance from the health facility, financial constraints, self-neglect sometimes inability of the primary physician to recognise the disease was also one of the important causes found. Precious time was lost in treating the patient symptomatically rather than recognizing suspecting and referring the disease it was found to be 3.6 months in the present study. This is also one of the causes of late presentation.

Unfortunately, the medical delay can be attributed to lack of competency of health workers to gynecological examination, knowledge about cervical cancer diagnosis and asymmetric relationship between health care providers and the patients.[10-12] Inadequate knowledge of cervical cancer symptoms, screening and diagnostic procedure among health workers is one of the main factors in delayed diagnosis.[13] Eventually leading to misdiagnosis in women. The health worker fails to do an adequate cervical examination because he is not able to do it, is also very important factor seen in the present study. We agree to the finding noted by Mayor S, and Ecert et al.[14,15]

The social, medical and patient delay can be attributed to the lack of screening programmes with implementation in India. Present studies results are comparable to studies done in Nigeria, Pakistan and other Asian and African countries.[8,16-18] The universal screening programmes in UK have shown to work miraculously in reducing the morbidity, incidence by 50-60% and mortality by 21-43% in this country. This is evident in the age group of 50-64 years.[19] The screening programmes will also result in detection of early cases and in-situ cases of cancer cervix.[20] The VIA i.e. visual inspection with acetic acid and VILI i.e. visual inspection with Lugols Iodine are excellent tools for screening programmes in a country like India.[21,22]

CONCLUSION

The high disease burden of a preventable cancer of the uterine cervix is totally unwarranted. The magnitude of cases can be drastically reduced by concentrated prevention and control efforts in India. Prevention of cervical cancer include delaying the age at initiation of sexual activity to above 18 years, spreading cancer awareness in women and with well-equipped health workers with diagnosis and knowledge of cancer cervix. This can prevent the medical and patient delay in the diagnosis of cancer cervix. HPV vaccination of the eligible population and early detection and treatment of cervical precancers with a single-visit 'screen-and-treat' approach appear promising for low-middle-income countries, especially for women living in rural and remote areas. This is a dream come true in India.

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