



Evaluation of socio-demographic profile of patients with cervical cancer at regional cancer centre in manipur

KEYWORDS

Cervical cancer, Socio-demographic profile, Risk factors

T.Dhaneshor Sharma

Associate Professor, Department of radiotherapy, Regional Institute of Medical Sciences, Imphal, Manipur, India

Neeta Sinam

Post Graduate, Department of radiotherapy, Regional Institute of Medical Sciences, Imphal, Manipur, India

Th.Tomcha Singh

Professor, Department of radiotherapy, Regional Institute of Medical Sciences, Imphal, Manipur, India

Rk.Praneshwari Devi

Associate Professor, Department of Obstetrics and Gynaecology, Regional Institute of Medical Sciences, Imphal, Manipur, India

S.Rajesh Sharma

Post Graduate, Department of radiotherapy, Regional Institute of Medical Sciences, Imphal, Manipur, India

Arindam Bhaumik

Post Graduate, Department of radiotherapy, Regional Institute of Medical Sciences, Imphal, Manipur, India

Ronald Regan Kharbuli

Post Graduate, Department of radiotherapy, Regional Institute of Medical Sciences, Imphal, Manipur, India

ABSTRACT

Background: Increasing incidence of cervical cancer has been a major health problem for women in India. Knowledge of socio-demographic profile of patients with cervical cancer in North-East India may help in planning prevention, screening and early detection health programme of cervical cancer in this region.

Methods: This is a descriptive study on 200 case series of cervical cancer who were registered at Regional cancer centre in Manipur during the period from January, 2013 to December, 2015. The data were analyzed using SPSS- 15 and results were presented in percentage and simple frequency.

Result: Majority (55.5%) of the patients were in the age group of 40 and 59 years. The commonest presenting symptoms were abnormal vaginal bleeding (50.0%) and the proliferative growth was the commonest primary lesion type (50.0%). The commonest histopathology observed was squamous cell carcinoma (95.0%). Majority of the patients were in stage III (39.5%), smokers (42.0%) and had history of chewing betel quid (33.0%). 120 patients (60%) were from rural areas, 130 patients (65%) were illiterate, 100 patients (50.0%) belonged to Class III socio-economic status and 126 patients (63.0%) were Hindus. Maximum numbers of patients were housewives (90.0%), married before the age of 20 years (65.0%), had parity of 3-6 (81.5%) and had history of abortion (40.0%). Fourteen patients (7.0%) had co-morbidities; Hypertension (3.5%), Diabetes (2.0%) and Pulmonary tuberculosis (1.5%).

Conclusion: By improving the awareness regarding the risk factors, socio-demographic factors and symptoms of this leading cancer, any further increased incidence and delay in treatment could be minimized in this region.

Cervical cancer is the fourth most common cancer in women worldwide with an estimated 266,000 deaths from this leading cancer in 2012, accounting for 7.5% of all female cancer deaths. Around 85% of global burden of cervical cancer and 87% of cervical cancer deaths occur in the less developed regions where cervical cancer accounts for almost 12% of all female cancers. Moreover, in Eastern and Middle Africa, cervical cancer remains the most common cancer in women.¹

In India, 122,844 women are diagnosed every year with cervical cancer and 67,477 die from this cancer. A population of 432.2 million women aged 15 years and older are at risk of developing cervical cancer in India. In women in the age group of 15-44 years, cervical cancer is the second most common cancer.²

The latest National Cancer Registry programme (NCRP), 2009 -2011 had reported that Aizawl district in the north eastern part of India had the highest levels of cervical cancer at an age-adjusted rate of 24.3, followed by Barshi Expanded at 19.5 and Bangalore at 18.9. Moreover, the recent NCRP also had shown cervical cancer to be the third commonest cancer in females with age-adjusted incidence rates (AARs) of 7.3/100000 in Manipur State.³ However, based on reports of population-based registries, cervical cancer is on the declining trend in India, but it remains to be a major health problem

among women in India.⁴

Cancer risk factor is any substance or condition that increases the risk of developing cancer. Despite, incidence rate of cervical cancer is known to vary from region to region based on regional prevalent risk factors, common risk factors are number of sex partner, age at first sexual intercourse, age at first birth, infectious agents such as human papilloma virus (HPV), herpes simplex virus type 2, smoking, nutrition, parity and oral contraceptive use.^{5,6} Moreover, socio-demographic factors may have an impact in delayed reporting and late-stage presentation among patients with cervical cancer.⁷ Thus, knowledge of socio-demographic profile of patient may help in planning screening and early detection health programme of cervical cancer.

Many patients of cervical cancer may have more than one symptom at the time of presentation. Common symptoms are abnormal vaginal bleeding, vaginal discharge, post-coital bleeding and lower abdominal pain.^{8,9} Usually, squamous cell carcinoma is the common histological type found in the ectocervix and commonly adenocarcinoma type is found in the endocervix.¹⁰ In fact, cervical cancer is a curable disease if treated in early stage and considered to be an ideal gynaecological malignancy for prevention and screening.

In view of the potential for prevention, Multifactorial causation of this cancer, the threat it poses and unavailability of any report on socio-demographic profile of patients from this region, the present study on socio-demographic pattern of patients with cervical cancer had been conducted.

METHODS

Regional Cancer Centre (RCC), Regional Institute of Medical Sciences (RIMS) is a biggest referral center covering neighboring North-eastern states in India i.e. Nagaland, Mizoram, and bordering Myanmar. **This study is a descriptive study on 200 case series** of cervical cancer who were registered at RCC after histopathological confirmation during the period from 1st January 2013 to 31st December 2015 and case notes of those 200 patients were reviewed for socio-demographic data like religion, socio-economic status (Modified BG Prasad's Classification), age in years (categorized in 20-39, 40-59 and 60-80), education level (Illiterate, primary/secondary and above secondary), occupation (house wife/manual labour/ others), marital status (married /widowed/separated), age at marriage in years (<20 and 20+) and number of pregnancies (0, 1-3,4-6 and 6+), findings of clinical history including smoking, consumption of tobacco in any form, physical examination, histopathological findings, investigation reports and disease staging etc. Cases without complete information and other cases who had undergone hysterectomy prior to registration were excluded in the present study. Variables used in result analysis were **age, religion, education level, socioeconomic status, parity, stage, histopathology, presenting symptom and type of growth**. An approval from the Institutional Ethics Committee for research involving human subjects was obtained before the study was conducted. Confidentiality of the patient's identity was maintained. The data were analyzed using SPSS 15 and **descriptive statistics was used as type of statistical analysis test.**

RESULTS

Among the patients, the ages ranged from 28 to 84 yrs. The mean age of presentation was 52.6 ± 0.82 yrs. The number of patients begins to increase after the age group of 20-39 years (15.0%), reaches a peak between 40 and 59 years (55.5%), then begins to decline in the age group of 60-80years (29.5%) as shown in table 1.

Table-1: Socio-demographic profile of patients (n=200)

Socio-demographic factors	Frequency	Percentage
AGES (YEARS)		
20-39	30	15.0%
40-59	111	55.5%
60-80	59	29.5%
RELIGION		
Hindu	126	63.0%
Christian	56	28%
Muslim	14	2.0%
Others	4	7.0%
EDUCATION		
Illiterate	130	65.0%
Primary education	20	10.0%
Secondary education	34	17.0%
Above secondary education	16	8.0%
SOCIOECONOMIC STATUS		
I	8	4.0%
II	12	6.0%
III	100	50.0%
IV	60	30.0%
V	20	10.0%
PARITY STATUS		
0	0	0%
1-3	60	30.0%

4-6	104	52.0%
Above 6	36	18.0%
STAGING		
IA	0	0
IB	30	15.0%
IIA	26	13.0%
IIB	45	22.5%
IIIA	16	8.0%
IIIB	65	32.5%
IVA	8	4.0%
IVB	10	5.0%
	200	

In the majority of patients (56.0%), presentations were within 3 months from the onset of symptoms. Many patients (80.0%) had more than one symptom at the time of presentation. The commonest presenting symptoms were abnormal vaginal bleeding (50.0%) followed by white discharge per vagina (35.5%) and irregular menstruation (27.5%). Proliferative type of growth was found more frequently (50.0%) followed by ulcero-infiltrative (17.0%) and infiltrative lesions (10.0%) respectively. The commonest histopathology observed was squamous cell carcinoma (95.0%) followed by adenocarcinoma type (5.0%). No patient had other histological types. Moderately differentiated squamous cell carcinoma.(76.84%) affecting the patients in the age group of 60-80yrs (86.44%), 20-39years (83.33%) and 40-59years (63.06%) respectively. The patients were staged according to the clinical staging i.e International Federation of Gynaecology and Obstetrics (FIGO) for cervical cancer. Only 30(15.0%) of total patients presented in Stage I, 71(35.5%) in Stage II, 81(40.5%) in stage III and 18(9.0%) in stage IV respectively. Of the total patients, 84 patients (42.0%) were smoker, 66 patients (33.0%) had history of chewing betel quid, 40 patients (20.0%) had no history of such habits and 10 patients (5.0%) were known alcoholic. 33 patients (39.2%) among the smokers admitted regular smoking at least 1-5 sticks per day in the past 20 years.

As per Table-I, 120 patients (60.0%) were from rural areas ,130 patients (65.0%) were illiterate,100(50.0%) belonged to Class III socio-economic status and 126 patients (63.0%)were Hindu followed by Christian(28.0%),Muslim(2.0%) and other religion(7.0%) respectively. Histories of occupation revealed that maximum number of patients were housewives (90.0%) followed by manual labour (6.0%) and govt. employees (4.0%).

In this study, all patients (100%) were married;65.0% of them married before the age of 20yrs, 80 patients (40.0%) had history of abortion, 163patients (81.5%) had parity of 3-6 and 120 patients (60.0%) had history of child birth at home by local dais, 14 patients (7.0%) had comorbidity; Hypertension (3.5%), Diabetes (2.0%) and Pulmonary tuberculosis (1.5%).

DISCUSSION

Majority of patients (55.5%) were in the age group of 40-59 years similar to the findings of previous studies in other high-incidence regions in India.^{11,12,13} In contrast to our findings, majority (37.0%) of the patients belonged to the age group of 51-60 years in a study in north India,¹⁴ 46% in the age group of 50-64years in another study in south India¹⁵ and 62.7% in the age group of 50 years or more in a study report from neighboring country, Nepal.¹⁶

One hundred and twelve patients (56.0%) had presented to our centre within 3 months from the onset of symptoms with median diagnostic delay of 150 days similar to the findings of a study¹⁶ conducted in neighboring country, Nepal where median total diagnostic delay was 157 days.

The common presenting symptoms in our study were abnormal

vaginal bleeding (50.0%), white discharge per vagina (35.5%) and irregular menstruation (27.5%) respectively similar to the findings of a study in Western India.¹¹ Where as in few studies,^{8, 13, 15} majorities of the cervical cancer patients had presented with excessive foul smelling with or without blood stained vaginal discharge. But, less number of our patients (4.0%) had post coital bleeding compared with the findings of a study,¹³ where, 16.08% of the patients had post coital bleeding.

Squamous cell carcinoma was the most common histopathological type accounting 95.0% of the total cases followed by adenocarcinoma type (5.0%) similar to the findings of previous studies.^{11,13} Moderately differentiated squamous cell carcinoma type (73.0%) was the most common subtype of squamous cell carcinoma followed by well differentiated squamous cell carcinoma type (12.5%) and poorly differentiated squamous cell carcinoma type (9.5%), similar to study findings from high - incidence region of Eastern India¹¹ where moderately differentiated squamous cell carcinoma type was higher (58.96%) than well differentiated squamous cell carcinoma type (29.48%) and poorly differentiated squamous cell carcinoma type (11.56%). Whereas, in a south Indian study,¹³ poorly differentiated squamous cell carcinoma type was the second most common type (25.62%) next to moderately differentiated squamous cell carcinoma type (54.77%).

Similar to the findings of a south India study,¹⁵ majorities of our patients (71.0%) were diagnosed in advanced stages: IIB (32.5%), IIB (22.5%), IV (9.0%) and IIIA (7.0%) respectively. But, unlike our findings in a study in western India¹¹, majority of the patients were in stage IIB (35.56%) followed by stage IIB (31.11%). These findings may reflect lack of awareness about the disease in the general population of this region compared with those of western India.

In this region, chewing of betel quid which contains areca nut, betel leaf and slaked lime with or without tobacco and smoking are very common habits among female population over the last many decades either as a part of traditional practice or life style. Thus, majority of our patients were smoker (42.0%) and had been chewing betel quid (33.0%) since young age. Other studies¹⁷ already had shown that, chewing of betel quid (Pan) and smoking to be the risk factors of cervical cancer. Therefore, in our patients, possibly smoking and betel quid chewing could be one of the prevalent risk factors in majority of the patients. Thus, more studies are needed to further understand the prevalent risk factors in this region.

Maximum numbers of patients (62.0%) were from rural areas similar to the findings of other studies^{14, 15} where majority too (55% to 77.0%) belonged to the rural area. Similar to the findings of a study^{15, 130} patients (65.0%) in this study were noted illiterate suggesting low educational status to be one of the contributing factors of cervical cancer.

In this evaluation, majority of the patients were Hindus (63.0%) and less number of patients were Muslim (2.0%) similar to the findings of previous studies.^{14, 15} Studies in the recent past had shown the possibility of low incidence of cervical cancer among Muslim females due to the practice of ritual circumcision among Muslim men.^{12, 18} But, according to census of India: 2011, of the 2855794 people in Manipur state, there were 1181876 (41.39%) Hindus, 239836 (8.40%) Muslims, 1179043 (41.29%) Christians and others (9.0%). In view of the above census report, the major possibility for this increased number of Hindu female patient compared with number of Muslim female patient could be due to bigger population of Hindus in this region. Moreover, 50.0%, 30.0%, and 10.0% of total patients were found to be in socioeconomic classes III, IV, and V, respectively. These findings are in agreement with findings of earlier studies^{15, 19, 20} and increase number of our patients in lower socioeconomic status is a reflection of dietary deficiency, low personal hygiene and prevalence of genital infection among them.

One hundred and sixty two patients (81.5%) had parity of 3-6 supporting findings of other studies^{9, 10, 13, 19} where parity with 3 or more births was found to be associated risk factor of cervical cancer.

Moreover, another study²¹ had shown that among women with persistent high-risk HPV infection, increasing parity increases the risk for subsequent cervical intraepithelial neoplasia grade 3 thereby highlighting the combined role of reproductive risk factor and HPV infection in the causation of cervical cancer. Increasing age and parity also could increase cytopathological abnormalities among females.¹²

In this study, all the patients (100.0%) were married and majorities (65.0%) of them were married before the age of 20 years. The present findings were in accordance with the observations of few studies.^{12, 18, 22}

Earlier studies²³ had shown that women with one abortion face a 2.3 relative risk of cervical cancer compared to non-aborted women and with two or more abortions face a 4.92 relative risk. In this study, 80 patients (40.0%) had history of abortion.

In our present study,¹⁴ patients (7.0%) were found with co-morbid conditions at the time of presentation. Hypertension was the most common co-morbid condition followed by diabetes and pulmonary tuberculosis. Such co-morbid conditions at the time of presentation may influence the prognosis of patients with cervical cancer²⁴ and cervical cancer survivors may have more co-morbidities than the general population.²⁵ Thus, paramount importance of joint clinic and vigilant follow-up of co-morbidities is being emphasized into the care of cancer survivors.

In conclusion, by improving the awareness regarding the risk factors and symptoms of this leading cancer, any further increased incidence and delay in treatment could be minimized in this region. Since cervical cancer is very much curable if treated in early stage, the present study again has emphasize the urgent need for implication of health awareness programme to general population for prevention, screening, early detection to reduce the morbidity and mortality associated with cervical cancer.

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Conflict of interest

The authors affirm no conflict of interest in this study.

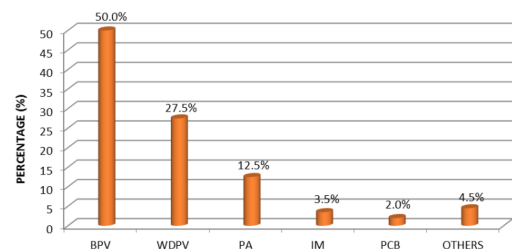


Figure I: Showing different mode of clinical presentation

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