



A STUDY ON AWARENESS OF RISK FACTORS AND SCREENING OF CERVICAL CARCINOMA: AMONG PATIENTS AND THEIR FEMALE ATTENDANTS AT REGIONAL CANCER CENTRE, AGARTALA, TRIPURA.

Clinical Research

**Shiromani
Debbarma**

MD in Radiation oncology Department of Radiation Oncology, Regional Cancer Centre, Agartala, Tripura, India. *Corresponding Author

**Gautam
Majumdar**

MD in radiation oncology and Assistant professor, Department of Radiation Oncology, Regional Cancer Centre, Agartala, Tripura, India.

ABSTRACT

Purpose: To study the awareness of risk factors and knowledge about screening of cervical carcinoma among patients and their female attendants at regional Cancer Centre.

Materials and method: A cross-sectional interview based study was carried out at Regional Cancer Centre, Agartala in 2017. Patients and their female attendants visiting at outpatient department (OPD) were selected randomly by a predesigned and a pretested questionnaire. Altogether 350 women were interviewed.

Observation and results: Among women, Primary level of education (16.8%) was more common than secondary education (10.0%) and illiterate women (64.8%) were most common. Majority of women (80.1%) belonged to rural areas and were of low socioeconomic strata (50.2%) (Class-III modified BG Prasad's classification). The knowledge of associated risk factors of cervical cancer such as increasing age, early sexual activity, multiple sexual partners, multiparity, consumption of alcohol, use of tobacco and tobacco products were found inadequate among women. Most of the women (64.5%) who participated were not aware of about cervical cancer screening.

Conclusion: Women who were interviewed were mainly from rural areas and majority of them were illiterate. Maximum numbers of women were not aware of risk factors of about carcinoma cervix and as well as about the screening of this cancer.

KEYWORDS

Cervical cancer, screening, awareness, Tripura.

Introduction:

Cervical cancer is one of the leading cancers of women and accounts 12% of all cancer worldwide. The disease is more common in developing regions. In Eastern and Middle African women, cervical cancer remains the most common cancer^{1,2,3}.

In India, carcinoma cervix is the second most common cancer in women; about 122,844 new cases are diagnosed every year and 67,477 cases die from this disease⁴. Between the years 2009 to 2011, the highest incidence of cervical carcinoma was found in Aizawl district, Mizoram, a North-Eastern state of India where the age adjusted rate was found 24.3⁵.

A number of risk factors for the development of cervical cancer have been identified. There are association between this cancer and poor genital hygiene, early age of first intercourse and high parity. The numbers of male sexual partners and promiscuity of sex are considered to involve increasing the risk of this cancer^{6,7,8}.

Use of tobacco and its products in terms of smoking and chewing of tobacco etc can contribute to the development of cervical cancer. Consumption of alcohol by women folks can also increase the chances of the disease. There is an increased risk observed in women belonging to lower socio-economic strata^{9,10,11}.

Cervical carcinoma has multi steps and takes several years to developed cervical cancer from cellular atypia to dysplasia. Cervical cancer can be most effectively detected in early stages of disease by organized screening programs. Detection of cervical cancer by screening can reduce incidence and mortality by 80% of this disease as shown in the developed countries^{12,13}.

The study of awareness about the disease, knowledge of associated risk factors and screening of cervical cancer is probably never done before in Tripura.

In view of above circumstances, a study was conducted at regional cancer centre, Agartala to assess the knowledge of about the risk factors and awareness about screening of cervical cancer among women in Tripura.

Materials and method:

A cross-sectional interview based study was carried out at regional cancer centre (RCC), Agartala, in 2017. Patients and their female attendants visited at outpatient department (OPD) were randomly

selected by a predesigned and a pretested questionnaire. In this study, 350 women were available for questionnaire.

Data including age, education, socioeconomic status, parity, and residence from where they belonged were recorded. Pre-framed questionnaire were asked to patients and to their relatives who were accompanying with patients at RCC OPD (Table-2).

Women below 15 years of age and patient who were not able to answer to questionnaire were excluded from the study.

Data collected were kept confidential and secret.

The data obtained were analysed and results were presented in frequency and percentage.

Observation and results:

Table -1, showed maximum number of women belonged to the age group of 40-60 years. Among women interviewed, 281 women (80.1 %) were coming from rural areas, 227 women (64.8%) were illiterate, and 176 women (50.2%) belonged to Class III socio-economic strata (modified B.G.Prasad's classification).

Table-1: Sociodemographic profile of study population

Variables	Number	%
Age (years)		
15-29	54	15.4%
30-45	118	33.7%
46-60	170	48.5%
>60	8	2.2%
Education		
Illiterate	227	64.8%
Primary	59	16.8%
Secondary	35	10.0%
Above secondary	29	8.2%
Socioeconomic class (modified BG Prasad's classification)		
I	13	3.7%
II	21	6.0%
III	176	50.2%
IV	103	29.4%
V	36	10.2%
Place		
Rural	281	80.1%
Urban	69	19.7%

Increasing age and early age of first sexual activity are related to the development of cervical cancer, was known to 102 women (29.1%) and 38 women (10.8%), but the facts were not aware by 186 women (53.1%) and 249 women (71.1%) respectively, in this study. As per table -2, risk factors, multiple sexual partners and multiparity were known to 260 women (74.2%) and 76 women (21.7%).

Table-2: knowledge of about risk factors of cervical cancer

Risk Factors	Age groups					%
	15-30	30-45	45-60	≥ 60	total	
Increasing of age						
Yeas	14	31	50	7	102	29.1
No	31	54	92	9	186	53.1
Do not know	7	15	34	6	62	17.7
Early sexual activity						
Yes	7	12	16	3	38	10.8
No	45	73	117	15	249	71.1
Do not know	63	14	19	26	4	18
Multiple sexual partners						
Yeas	31	95	121	13	260	74.2
No	22	6	21	4	53	15.1
Do not know	9	8	14	6	37	16.5
Multiparity						
Yeas	11	23	35	7	76	21.7
No	45	84	110	13	252	72
Do not know	4	6	9	3	22	6.2

In this study, though 52 women (14.0%) were aware that smoking can cause cervical cancer but 156 women (44.5%) were unaware about use of alcohol which can increase the risk of cervical cancer. Moreover, 46 women (13.1%) did not know that smoking can cause cervical cancer as shown in the Table-3.

Table-3: Knowledge of about risk factors of cervical cancer

Risk Factors	Age groups					%
	15-30	30-45	45-60	≥ 60	total	
Alcohol						
Yeas	16	27	48	8	95	27.1
No	22	46	80	8	156	44.5
Do not know	13	26	56	4	99	28.2
Smoking						
Yeas	9	15	19	9	52	14
No	40	61	130	21	252	72
Do not know	9	7	23	7	46	13.1
Screening						
Yeas	8	16	18	9	51	14.5
No	31	65	118	12	226	64.5
Do not know	10	22	36	5	73	20.8

About the screening, only 51 women (14.5%) were aware of about cervical cancer screening, majority, 226 women (64.5%) were not having knowledge about screening of the disease (Table-3).

Discussion:

The majority of participants were at the age group of 46 to 60 years. These findings were similar to other studies from less developed countries, resembling observed peak incidence of cervical cancer in the older (50-59) age group. These results highlight a rise in cervical cancer with prolonged sexual period¹⁴.

It was seen in the present study that 281 women (80.1%) were from rural areas. Similar observations were noted by other studies^{14,15} too where majority of women belonged to rural areas. The findings may be reflecting the knowledge of awareness of about the cervical cancer risk such as poor genital hygiene, lack of awareness healthcare and or lack of access to health care services by those groups of women, which may be contributing to the high prevalence of disease in rural areas.

In this study, primary level of education (16.8%) was more common than secondary level of education (10.0%) but highest numbers of women (64.8%) were illiterate. A study by Kumar HNH et al¹⁶ noted 130 women (65.0%) were illiterate, suggesting of low educational status to be one of the contributing factor of cervical cancer. A study of causal relationship between education and cancer incidence has also shown that the risk of cervical cancer is inversely associated with

increasing educational levels, highlighting the factors which influence the causal pathway between education and cancer risk such as the reproductive factors, sexual behavior, utilization of health services and demographic factors including risky behaviors as smoking and non balanced diet¹⁷.

Cervical cancer is said to be more common in low income group, a reflection of dietary deficiency and low personal hygiene. Most of the patients were not able to afford the higher cost of cervical cancer screening and were left undiagnosed^{18,19}. We have observed in this study, majority of women, 176 (50.2%) were of class III socio-economic status.

Knowledge about other associated risk factors of cervical cancer showed inadequate among our participants such as increasing in age, early onset of sexual activity, multiple sexual partners and multiparity. Majority of interviewed women were not aware those risk factors and was observed in women 186(53.1%), 249(71.1%), 53(15.1%) and 252(72%) respectively. Those findings were similar to the results observed by other studies. A pooled analysis of case control studies on cervical cancer from eight developing countries provide convincing evidence for the risk associated with early age at first sexual intercourse. Moreover, age at marriage and age at first pregnancy were highly interrelated in context to the developing countries, where mostly there is a very short latency period between age at marriage and age at first pregnancy^{20,21,22}.

Personal habits such as smoking and consumption of alcohol contribute to the development of cervical cancer. This was not aware to 252 women (72 %) and 156 women (44.5%) respectively by our participants. These findings are consistent with others studies carried out by Rajkumar T et al²³ and Misra JSet al²⁴.

Cervical cancer is readily preventable through an effective screening program implementation. Therefore, cervical cancer screening plays a vital role in the early diagnosis of this cancer. Among participants, we observed 226 women (64.5%) did not aware about screening and only 51 women (14.5%) were aware about the test. Recent study, in Pakistan by Ali SF et al²⁵ showed that only 40% of study population knew of about the test and majority of women were not aware of about these tests.

Conclusion:

The knowledge of cervical cancer risk factors and its screening were low in our study population. Majority of women who have participated were from of rural areas. Women were less aware of associated risk factors of cervical cancer such as increasing of age, early age of sexual activity, multiple sexual partners, multiparity, consumption of alcohol and smoking. But because of small sample size conclusion could not be drawn and further study is warranted.

About cervical cancer screening, more sensitization regarding availability of cervical cancer screening test for favour of early detection of the disease among the general population particularly rural women is required.

Acknowledgement: We would like to thank to all patients and patients' party for sharing information.

Conflict of interest: The authors affirm no conflict of interest in this study

References:

- Jemal A, Center MM, DeSantis C, Ward EM. Global patterns of cancer incidence and mortality rates and trends. *Cancer Epidemiol Biomarkers Prev* 2010; 19(8): 1893-907.
- Torre LA, Bray F, Siegel RL, Ferlay J, Lortet-Tieulent J, Jemal A. Global Cancer Statics, 2012. *CA Cancer J Clin* 2015; 65(2): 87-108.
- Siegel R, ward E, Brawley O, Jemal A. Cancer statistics, 2011: the impact of eliminating socioeconomic and racial disparities on premature cancer deaths. *CA Cancer J Clin* 2011; 61(4):212-36.
- Ferlay J, Soerjomataram I, Ervik M, Dikshit R, Eser S, Mathers C, et al. GLOBOCAN 2012 v1.0, Cancer Incidence and Mortality Worldwide: IARC Cancer Base No. 11. Lyon, France: International Agency for Research on Cancer; 2013.
- National Centre for Disease Informatics and Research, National Cancer Registry Programme, ICMR. Three Year Report of Population Based Reg-istries, 2009-2011. Bangalore, India: NCDIR-NCRP(ICMR); 2014.
- Vaccarella S, Franceschi S, Herrero R, Munoz N, Snijders PJ, Clifford GM, et al. Sexual behavior, condom use, and human papillomavirus: pooled analysis of the IARC human papillomavirus prevalence surveys. *Cancer Epidemiol Biomarkers Prev* 2006; 15 (2):326-33.
- Suma RK, Keerthi SY, Prasanna KS, Jayaram S. A community based study of the sociodemographic and behavioral risk factors for cervical cancer among urban women in coastal Karnataka. *Annals Commun Health* 2014; 2(2): 35-38.

8. Jensen KE, Schmiedel S, Norrild B, Frederiksen K, Iftner T, Kjaer SK. Parity as a cofactor for high-grade cervical disease among women with persistent human papillomavirus infection: a 13-year follow-up. *Brit J Cancer* 2013; 108(1): 234–39.
9. Rajkumar T, Franceschi S, Vaccarella S, Gajalakshmi V, Sharmila S, Snijders PJF, et al. Role of paan chewing and dietary habits in cervical carcinoma in Chennai, India. *Br J Cancer* 2003; 88(9): 1388–93.
10. Vaccarella S, Herrero R, Snijders PJ, Dai M, Thomas JO, Hieu NT, et al. Smoking and human papillomavirus infection: pooled analysis of the International Agency for Research on Cancer HPV Prevalence Surveys. *Int J Epidemiol* 2008; 37(3):536–46.
11. Castellsagué X, Pawlita M, Travier N, Waterboer T, Margall N, Bosch FX, et al. Smoking as a major risk factor for cervical cancer and pre-cancer: results from the EPIC cohort. *Int J Cancer* 2014; 135 (2): 453–66.
12. W.H.O. Comprehensive Cervical Cancer Control: A guide to essential practice. WHO 2006; 32, 49.
13. Arbyn M, Rebolj M, De Kok IM, Fender M, Becker N, O'Reilly M, et al. The challenges of organizing cervical screening programmes in the 15 old member states of the European Union. *Euro J Cancer* 2009; 45(15):2671–8.
14. Kumar HB. Study of Socio Demographic Profile of Cancer cervix patients in Tertiary Care Hospital, Karimnagar (Andhra Pradesh). *Int J Biol Med Res* 2012; 3(1):2306–10.
15. Kaverappa VB, Prakash B, Kulkarni P, Renuka M. Sociodemographic profile of patients with cervical cancer in a tertiary-care cancer hospital in Mysuru, Karnataka. *Int J Med Sci Public Heal* 2015; 4(9):1187–90.
16. Kumar HNH, Tanya S. A Study on Knowledge and Screening for Cervical Cancer among Women in Mangalore City. *Ann Med Health Sci Res* 2014; 4(5): 751–56.
17. Swaminathan R, Selvakumaran R, Vinodha J, Sauvaet C, Esmy PO, Shanta V et al. Education and cancer incidence in a rural population in south India. *Cancer Epidemiol* 2009; 33(2): 89–93.
18. Thulaseedharan JV, Malila N, Hakama M, Esmy PO, Cheriyan M, Swaminathan R et al. Socio demographic and reproductive risk factors for cervical cancer - a large prospective cohort study from rural India. *Asian Pac J Cancer Prev* 2012; 13(6):2991–95.
19. Fotra R, Gupta S, Gupta S. Socio-demographic risk factors for cervical cancer in Jammu region of J and K state of India first ever report from Jammu. *Indian J Sci Res* 2014; 9 (1): 105–10.
20. Mukherjee BN, Sengupta S, Chaudhuri S, Biswas LN, Maiti P. A case-control study of reproductive risk factors associated with cervical cancer. *Int J Cancer* 1994; 59(4), 476–82.
21. Louie KS, De Sanjose S, Diaz M, Castellsague X, Herrero R, Meijer CJ et al. Early age at first sexual intercourse and early pregnancy are risk factors for cervical cancer in developing countries. *Br J Cancer* 2009; 100(7): 1191–97.
22. Yaren A, Ozkilinc G, Guler A, Oztop I. Awareness of breast and cervical cancer risk factors and screening behavior among nurses in rural region of Turkey. *Euro J Cancer Care*. 2008; 17(3):278–84.
23. Rajkumar T, Franceschi S, Vaccarella S, Gajalakshmi V, Sharmila S, Snijders PJF et al. Role of paan chewing and dietary habits in cervical carcinoma in Chennai, India. *Br J Cancer* 2003; 88(9): 1388–93.
24. Misra JS, Srivastava S, Singh U, Srivastava AN. Risk-factors and strategies for control of carcinoma cervix in India: Hospital based cytological screening experience of 35 years. *Indian J Cancer* 2009; 46(2): 155–59.
25. Ali SF, Ayub S, Mansoor NF, Azim S, Afif M, Nida A et al. Knowledge and awareness about cervical cancer and its prevention amongst interns and nursing staff in tertiary care hospitals in Karachi, Pakistan. *PLOS ONE* 2010; 5(6) : e11059.