

Retrospective Study of Cervical Carcinoma at Tertiary Centre in Rajasthan

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Abstract

Objective: Present study was a retrospective analysis of all patients with cervical cancer attending OPD, radiotherapy department, SMS medical college Jaipur, Rajasthan from January 2018 to December 2018. The aim of this study was to know patient demographic profile, age, histology and staging of cervical cancer, compliance with treatment and follow-up.

Materials and Methods: Six hundred and fourteen registered patients of the cervical carcinoma were included in the study. Data were collected on various parameters and were analyzed. Treatment was administered according to clinical staging as per standard guidelines

Result: In this study, patients belong to various districts of Rajasthan (93.43%) followed by 6.57% from Haryana and Punjab. Maximum patients (59.72%) were aged 41–60 years. As per staging of cervix, Stage I comprises 9.77%; Stage II -25.79% ; Stage III - 28.95% ; and Stage IVA - 19.35 % . Squamous cell

carcinoma was the most common reported histopathology (90.62%). A significant proportion of the women defaulted after registration (18.24%) and during treatment (7.32%). About 16.12% of cases underwent Wertheim's hysterectomy and rest of patients was treated by radiotherapy with or without chemotherapy.

Conclusion: It is the second most common cancer after head and neck cancer at our center. The incidence of cervical cancer is unacceptably high at our center. Organized screening of cervical cancer needs to be adopted for early detection and management of the disease.

Keywords: cervical cancer, Squamous cell carcinoma, Adenocarcinoma, Wertheim's hysterectomy

Introduction

Globally, cancer is being recognized as one of the major causes of morbidity and mortality [1]. It is the second leading cause of death (16%) following cardiovascular diseases (31%) [2,3]. The GLOBOCAN

2018 reported that worldwide cancer burden is projected to have escalated to 18.1 million new cases and 9.6 million cancer deaths in 2018 [1]. The World Health Organization projects that number of global cancer deaths will rise by 45% between 2008 and 2030. Cancer is emerging as major global health issue in both developed and developing countries. Incidence of cancer is also increased in India due to early diagnosis and screening of cancer. The burden of cancer in India is projected to be over 1.1 million new cases and 0.78 million deaths in 2018 [4,5].

Globally, cervical carcinoma is the fourth most diagnosed cancer and cause of mortality in women with an estimated 570,000 cases and 311,000 deaths in 2018. [1] In contrast to developed countries, cervical cancer is a public health problem in developing countries like India. India alone accounts for one quarter of the worldwide burden of cervical cancer. It is one of the leading causes of cancer mortality accounting for 17% of all cancer deaths among women aged between 30 and 69 years. Human papilloma virus is the main causative factor of cervical carcinoma. Certain risk factors i.e. low socio economic status, smoking, early marriage before 18 years, young age at first coitus, multiple sexual partners and multiple child births increase the risk of developing cervical cancer. As per GLOBOCON 2018, cervical cancer is the third most common cancer accounting for 8.4 % cases after the breast (14%) and lip oral cavity (10.4%) and contributes 7.7% of all cancer deaths. [1]

We undertook a retrospective analysis of cervical cancer patients visited from rural/semi-urban/urban region of Rajasthan, Haryana and Punjab to evaluate the percentage of patients presenting with carcinoma cervix with their stages and the treatment modalities received.

Materials and Methods

Table 1: Age Wise Distribution

AGE	No. of patients	%
21-30 years	5	0.81
31- 40 years	94	15.27
41-50 years	222	36.11
51-60 years	145	23.61
61-70 years	136	22.22
>70 years	12	1.95

Table 2: Mode of Presentation Wise Distribution

Presentation	No. of patients	%
Postmenopausal bleeding	178	28.99
Irregular vaginal bleeding	223	36.31
Post coital bleeding	55	8.95
Continuous bleeding	34	5.53
White discharge with foul smelling	124	20.19

Table 3: Clinical Staging of Ca Cervix

STAGE	No. of patients	%
I	60	9.77
II A	59	9.67
II B	99	16.12
III A	20	3.22
III B	158	25.73
IV A	119	19.35

Table 4: Histopathology Wise Distribution

Histopathology	No. of patients	%
Adenocarcinoma	19	3.125
Large cell NK SCC	29	4.68
Poor differentiated malignant neoplasm	10	1.56
Squamous cell carcinoma	556	90.62

Table 5- Radiotherapy Wise Distribution

Radiotherapy	No. of patients	%
ONLY RT with brachy	72	11.72
CTRT with brachytherapy	304	49.51
CTRT without brachytherapy	81	13.19
Default after registration	112	18.24
Defaulter RT	45	7.32

Total 614 patients were studied. Majority of the patients (36.11%) belong to age group of 41-50 years followed by 23.61% of age group 51-60 years [Table1]. Majority of the patients i.e 36.31% had complaint of irregular bleeding per vaginum, 28.99% had complaint of postmenopausal bleeding and 20.19% patients had white discharge with foul smell [Table2].

On Hb distribution, Hb > 10 g/dl in 165 patients(26.87%), Hb 8-10 g/dl in 330 patients (53.74%), and Hb < 8 in 119 patients (19.38%). 25.73% patients had Stage 3B disease followed by 19.35% patients had stage 4A, 16.12% had 2B stage, 9.77% had stage 1, 9.67% had stage 2A, 3.22% had 3A stage [Table3].

On histopathology, 556 patients (90.62%) had squamous cell carcinoma while 29 patients (4.68%) had large cell non keratinizing squamous cell carcinoma, 19 patients (3.125%) had adenocarcinoma, 10 patients (1.56%) had poor differentiated malignant neoplasm [Table 4]. The treatment distribution for these patients as follows [Table5]: 72 patients (18.24%) underwent radiotherapy with brachytherapy, 304 (49.51%) had concomitant chemotherapy/radiotherapy (CT/RT) with brachytherapy, and 81 (13.19%) had concomitant chemotherapy/radiotherapy (CT/RT) without

brachytherapy because brachy were not possible due to distorted anatomical structure of the cervix. Of the 99 patients who underwent surgery, 87 patients were given postoperative CTRT.

Discussion

According to WHO, approximately 70% of cancer deaths take place in lower and middle income countries (LMICs) [7] . In LMICs including India, cancer patients have a poor prognosis because of late diagnosis and cases already grown to advanced stages, low cancer awareness and lack of cancer care facilities [8]. More than 80% of cancers in India present in advanced stages which makes their management a difficult task [9]. Cervical carcinoma is the second leading cause of mortality in females after breast cancer. Risk factors of cervical cancer include HPV, multiple sexual partners, sexually active at young age, HIV, frequent delivery, long term use of OCPs. [10]. According to report provided by Catalan Institute of Oncology (ICO) Information Centre on Human Papilloma virus (HPV) related cancers in India 2018, the crude incidence rate of HPV-related cervical cancer in India is 14.9% [11]. In cervical cancer, 83.2% females have HPV-16/HPV-18 detected, highlighting its importance in the development of cervical cancer [11].

In this study, majority of patients belong to age group 41-60 years [59.72%]. Demographics from HBCRs show that 30%–40% of cases lie in the range of 40–60 years [12]

SCC was the most frequent histopathology reported (90.62%) while adenocarcinoma was reported in 3.1% of cases. In India, squamous cell carcinoma are reported in 85–90% and adenocarcinoma in 10–15% of cases. Human papilloma virus (HPV) 16 is the most prevalent type among them compared to other parts of the world where the proportion of HPV16 is much

lower. In India, the prevalence of cervical cancer due to HPV 16 is 70–90%, while the occurrence of HPV 18 varies from 3% to 20% [13]. Majority of the patients presented with advanced stage disease with Stage IIIB and IV A, accounting for 25.73% and 19.35% of all cases respectively. Most of the cases presented as new cases, i.e., they had not received any treatment previously.

Approximately 16.12% of the patients who had undergone surgery outside our center were registered in the present study. Of these, a significant proportion had residual or recurrent disease.

18.24% patients were default after registration. This data reveal the lack of awareness and compliance with treatment in the rural population of our country.

Conclusion

Cervical cancer occurs during the reproductive period of a woman's life. It is the second most common cancer accounting 8.33 % of all cancer cases and first common cancer among gynecological malignancy at our centre. Risk factors associated with the disease were age, multiparty and poor socioeconomic status etc. Screening of cervical cancer in the sexually active women and HPV vaccination at young age could play an important role in reducing the incidence and mortality rate of cancer. Organized screening of cervical cancer needs to be adopted not only at tertiary center but also at primary health centers for early detection and management of the disease[14].

References

1. Bray F, Ferlay J, Soerjomataram I, Siegel RL, Torre LA, Jemal A. Global cancer statistics 2018: GLOBOCAN estimates of incidence and mortality worldwide for 36 cancers in 185 countries. *CA: a cancer journal for clinicians*. 2018 Nov;68(6):394-424.

2. Global Health Estimates 2016: Deaths by Cause, Age, Sex, by Country and by Region, 2000-2016. Geneva, World Health Organization; 2018; Human Development Report 2016. New York, United Nations Development Programme; 2016.
3. American Cancer Society. Global Cancer Facts & Figures 4th Edition. Atlanta: American Cancer Society; 2018.
4. World Health Organization. Global Health Observatory. Geneva: World Health Organization; 2018. Available from <http://gco.iarc.fr/> [accessed May 11, 2019].
5. Globocan India 2018. Population fact sheets p. 1-2. Available from <http://www.gco.iarc.fr/today/data/factsheets/populations/356-india-fact-sheets.pdf> [accessed on May 11, 2019].
6. NCCN Guidelines Version 1.2018 cervical cancer
7. World Health Organization. Cancer Key Facts. 2018. Available from <https://www.who.int/newsroom/factsheets/detail/cancer> [accessed on May 12, 2019].
8. Sivaram S, Majumdar G, Perin D, Nessa A, Broeders M, Lynge E, et al. Population-based cancer screening programmes in low-income and middle-income countries: regional consultation of the International Cancer Screening Network in India. *The Lancet Oncology*. 2018 Feb 1;19(2):e113-22.
9. Takiar R, Nadayil D, Nandakumar A. Projections of number of cancer cases in India (2010-2020) by cancer groups. *Asian Pac J Cancer Prev*. 2010 Jan 1;11(4):1045-9.
10. Prasad JB, Dhar M. Projections of burden of cancers: A new approach for measuring incidence

cases for India and its states–Till 2025. Journal of cancer policy. 2018 Jun 1;16:57-62.

11. Bruni L, Albero G, Serrano B, et al. ICO/IARC Information Centre on HPV and Cancer (HPV Information Centre). Human Papillomavirus and Related Diseases in India. Summary Report 10 December 2018. Available from <https://hvpcentre.net/statistics/reports/IND.pdf> [accessed on May 15, 2019].
12. Thulaseedharan JV, Malila N, Hakama M, Esmey 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 Pacific J Cancer Prev. 2012;13: 2991-5.
13. Shukla S, Bharti AC, Mahata S, Hussain S, Kumar R, Hedau S, et al. Infection of human papillomaviruses in cancers of different human organ sites. Indian J MeRes 2009;130:222-33.
14. Ronco G, Dillner J, Elfstrom KM, et al. Efficacy of HPV-based screening for prevention of invasive cervical cancer: follow-up of four European randomised controlled trials. *Lancet* 2014;383:524-532.