

Carcinoma of the Uterine Cervix in the Kumaon Region: Evaluation of Factors Contributing to Presentation at Advanced Stages (Stages IIB-IVB)

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Abstract

Background: Cervical cancer is the second most common cancer in Indian women, contributing to about fifth part of total cancer incidence. Majority of the cervical cancer cases in India present at advanced stages (Stage II B onwards). The purpose of this study is to analyze and evaluate factors which are contributing to presentation of cancer cervix patients in advanced stages. **Subjects and Methods:** This observational study recruited new and follows up patients of histologically confirmed diagnosis of cervical cancer visiting in outdoor patient department of Swami Rama Cancer Hospital and Research Institute, Haldwani, India (SRCH & RI) were asked to read and fill questionnaire, inquiring the details of factors which contributed to delayed presentation to seek health services; from 1st April 2017 to 31st March 2018. Of the 221 patients were recruited in this study, 6 patients were excluded for ambiguous history and 4 patients for consent withdrawal. **Results:** Of the 211 patients recruited in study, mean age of presentation was 53 years (SD 11.2), ranging from 30 to 78 years. Financial constrains (71%), lack of awareness for disease (66%), illiteracy (85%), difficult access to health services (46%), taking alternative treatment (30%) and poor family support (18%) were the most important contributing factors for delayed presentation at advanced stages. Lack of awareness that abnormal uterine bleeding could be malignancy, difficult access to health services, alternative treatment, low socioeconomic status, illiteracy and poor transportation services are main contributing factors to presentation of carcinoma cervix in advance stages. **Conclusion:** Apart from a proper screening programme; difficult access to health services due to remote location of residence in hilly areas, low awareness for cervical cancer, low socioeconomic status and lack of education are important contributory factors for presentation of cervical cancer in advanced stages.

Keywords: Carcinoma Cervix, advanced stage presentation, Contributing factors.

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Introduction

Cervical cancer is the second most common cancer in Indian women, contributing to about fifth part of total cancer incidence in women (Sreedevi A et.al.). While in the western world most of the cervical cancer patients are diagnosed in curable early stages (Stage II A and below), majority of the cervical cancer cases in India present at advanced stages (Bobdey S et.al.). Five year survival rate falls rapidly with increasing stage at presentation as for stage I it is of the order of 80% and for stage IV it is about 15% only (American cancer society; May 2018,). Since stage at presentation is a very important prognostic and predictive factor, the presentation at advanced stages leads to poor treatment outcomes.

Patients presenting with advanced stages of disease are more likely to develop anemia, ureteric obstruction with hydronephrosis and hydronephrosis, renal failure and urinary

tract infection (Mlange R et. al.). Whereas in India, many cancers tend to have a high incidence in urban areas, cervical cancer tends to have a higher incidence in remote areas (NCDIR Hospital based Cancer Registry 2012 to 2014 report). Socio-demographic factors contribute to the probability of experiencing a delay in the diagnosis of cervical cancers. The likelihood of a long delay in referral was greater in rural than urban areas.

At the department of Radiotherapy, Swami Ram Cancer Hospital and Research Center, Haldwani which runs as a part of the Government Medical College, Haldwani, Nainital (GMC HDW) and caters health services to hilly region of Kumaon, Uttarakhand and northern Uttar Pradesh. Over the study period of 2014 to 2018, it is estimated that, of all the new cervical cancer patients; 86% (Departmental data) were diagnosed as advanced stage (FIGO 2010 cervical cancer staging system IIB and above) cervical cancer at the time of presentation.

Poor treatment outcome in these advanced cervical cancer patients motivated us to analyze and evaluate factors which could have contributed to delay in seeking health services and progression of disease stage. We also aim to utilize the collected data to analyze awareness in relation to cervical cancer early diagnosis and treatment. The collected data could in turn be utilized to frame further surveillance programme and other measures for early diagnosis and treatment.

Subjects and Methods

This research project was approved by Institute ethical committee, GMC HDW. The study design employed was observational cross-sectional type. Participants were eligible if they have been diagnosed and histologically confirmed to have cervical cancer, with stage at presentation II B and above, aged between 18 to 80 years, visiting in outdoor patients department of SRCH&RI. Firstly participants were explained about the study and after due informed and written consent they were asked to read and fill questionnaire which was available in both English and Hindi and was focused on demographic, socioeconomic, presenting symptoms and detailed history of factors contributing to delayed presentation. In case of illiterate patients, a resident doctor/ medical staff assisted patients to read and understand the questionnaire. Patient refusing consent or withdrawal of consent, giving ambiguous history or self conflicting entries were excluded from the study. Patient’s identity was concealed. Socio-demographic information include name, age, sex, marital status, address, level of education, occupation, family size and monthly income. Clinical information includes height, weight, co-morbidity, type of malignancy or diagnosis and clinical stage. A detailed history of presenting symptoms, factors contributing to delayed presentation, taking alternative treatments, factors causing time elapse to take treatment was documented.

Data was analyzed using Base SAS version 9.4. Statistical analyses included descriptive statistics. We calculated frequencies for categorical data and mean and standard deviation (SDs) for continuous data.

Results

Of the 221 patients participated in the study; six patients were excluded for ambiguous history and four patients for consent withdrawal. Of the remaining 211 patients included in the analysis median age of presentation was 53 years (SD 11.2), ranging from 30 to 78 years. About half of the patients, 97 (46%) perusing treatment in our Institute were from Nainital district itself; followed by adjoining districts i.e. U.S. Nagar (44 patients, 21%), Almora (13 patients, 6%), Pithoragar (11 patients, 5%), Bageshwar (8 patients, 4%) and (38 patients, 18%) various other places of Utter Pradesh state of India. Assessment of level of education showed that 76 patients (36%) could not read and write, 59 patients (28%) went to school upto class VIII, 44 patients (21%) went to high school, 26 (12%) were intermediate and

only 6 (3%) were graduate.

Median family size was 6, ranging from 2 to 11. About four fifth of all patients 171(81%) were living below poverty line. Mean monthly income of family was 4325 INR per month and per capita income was 792 INR per month only. Mean weight and height of patients were 47.5 kg and 151.6 cm respectively (BMI 20.66). Most of the patients were married (209, 99%) and commonly accompanied by their husband. Only 23 (11%) patients were earning and rest 188 patients were homemakers. As source of income of family is concerned, agricultural was the most common (99, 47 %) followed by private jobs (38, 18%), daily wedges workers (54, 26%), government employee (5, 2%) and 15 patients had some other profession and source of income.

Abnormal vaginal bleeding in form of postmenopausal vaginal bleeding, irregular menstrual bleeding e.g. increased menstrual bleeding, or post-coital bleeding was most common presenting complaint followed by watery and foul smelling vaginal discharge loss of weight and appetite, pain abdomen, weakness or breathlessness, low back pain, pain in micturation or defecation and other symptoms.

Table 1: Symptoms at presentation with median duration in months

S. No.	Symptoms	Patient	Percentage	Median duration in months
1.	Abnormal vaginal bleeding	194	92 %	16
2.	Watery and foul smelling vaginal discharge	188	89 %	12
3.	Loss of weight and appetite	179	85 %	13
4.	Pain abdomen	154	73 %	18
5.	Weakness or breathlessness	116	55 %	6
6.	Low back pain	97	46 %	4
7.	Pain in micturation or defecation	49	23 %	2
8.	Other symptoms	42	20 %	3

Of all the locoregionally advanced patients of cervical cancer stage II B, III A, III B, IV A and IV B were 63, 41, 74, 12 and 21 respectively.

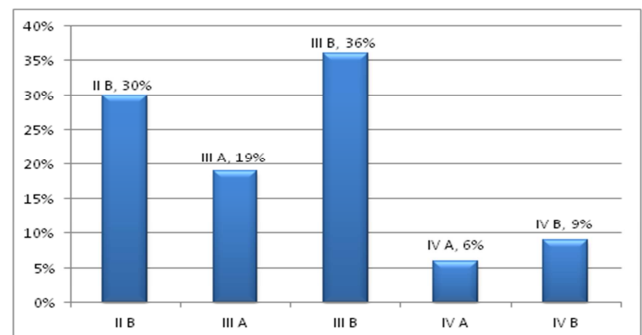


Figure 1: Stage at presentation of advanced cervical cancer patients

Most common first consultation was government doctors at peripheral health centers and community health centers as

109 (52%) patients went to them first. Fifty seven (27%) patients accepted that they showed belief in local healer and quacks. Thirty four (16%) patients consulted private general practitioners or gynecologists and only 11 (5%) consulted medical college first. Irrespective of patient first consultation about one third of patients (65, 31%) accepted to take alternative treatment or medication (local healer, quacks medication) from a non-registered medical practitioner and the median time delay in that treatment was 4 months and 22 days.

Table 2: Most common cause of delayed presentation

S. No.	Cause of delayed presentation	Patient	Percentage
1.	Financial constrains	151	71 %
2.	Lack of awareness	140	66 %
3.	Illiteracy	98	85 %
4.	Difficult access to health services	72	46 %
5.	Alternative treatment	65	30 %
6.	Poor family support	39	18 %
7.	Poor transportation services	21	10 %
8.	Other causes	16	7 %

The intention of treatment was radical in 186 (88%) of patients. For all the loco-regionally advanced (non-metastatic) cancer cervix patients, concurrent chemoradiation followed by three sessions in intra-cavity radiotherapy is recommended treatment and only 109 (59%) of patients treated with radical intention could complete recommended treatment. About one fifth (39, 21%) of patients planned for radical external beam radiotherapy had two or more than two days of treatment break.

Discussion

In the Western countries, cervical cancer is mostly diagnosed at pre-malignant and early invasive stages which are amenable to surgical treatments. However, in this region, most patients present at locally advanced (Stages IIB-IVA) and metastatic stage (Stage IVB), which precludes the use of surgery. Despite radical chemoradiotherapy, the survival prospects are low (5-50% 5-year overall survival). Indeed, cancer cervix has long history of

illness with apparent symptoms at early stages of disease as illustrated in this study; despite which patients present at advanced stages. Most of the patients visiting to our hospital are from nearby places so our patient management approach should be according to demo-geographical condition of Kumaon region. Literacy rate is of the order of 64 % in our patients population which is low in comparison to Uttarakhand female population (India censuses 2011 female literacy rate in Uttarakhand is 70%). Most of our patients were lying below poverty line in rural/ remote areas and malnourished. This reflects to cervical cancer strong association in illiterate, low socio-economic status, rural and malnourished population.

Conclusion

Apart from a proper screening programme; difficult access to health services due to remote location of residence in hilly areas, low awareness for cervical cancer, low socioeconomic status and lack of education are important contributory factors for presentation of cervical cancer in advanced stages.

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