

Clinicopathological Study of Cervical Cancer: A Retrospective Analysis

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ABSTRACT

Introduction: Cervical cancer remains the most common gynecological cancer among women in developing countries.

Objective: The objective was to analyze the clinical presentation and histopathological pattern of carcinoma cervix over a 3-year period.

Design: This was a retrospective analysis.

Results: The majority of the patients were between 40 and 50 years. Most of the patients presented at stage III. Squamous cell carcinoma was the most common histopathological pattern. Radiotherapy with concurrent chemotherapy was the modality of treatment.

Conclusion: The outcome significantly shows the inadequate screening program to detect preinvasive stage of carcinoma cervix.

Keywords: Carcinoma cervix, Chemotherapy, Histopathology, Radiotherapy, Squamous cell carcinoma.

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INTRODUCTION

Cervical cancer remains the most common gynecological cancer among women in developing countries. World-wide, cervical cancer continues to be a significant health care problem. In general, higher incidences are found in developing countries and these countries contribute to 83% of reported cases annually.

Objectives

A retrospective study of all patients with cancer cervix over a 3-year period was done from January 2012 to December 2014 at M. S. Ramaiah Hospital, a tertiary care center, to analyze the clinical presentation and histopathological pattern of the malignancy.

Design

This was a retrospective study.

Significance

The outcome of the analysis will help to take measures to diagnose the carcinoma at an early stage and to decrease the morbidity and mortality.

MATERIALS AND METHODS

This was a retrospective study carried out at M. S. Ramaiah Hospital. The aim was to analyze the clinical presentation and histopathological pattern of cervical carcinoma over a 3-year period from January 2012 to December 2014. The case files of all the histologically confirmed carcinoma were retrieved from the medical records department of the hospital and analyzed.

Information obtained included the demography (age, parity, occupation, educational status, and marital status), clinical history, clinical examination, and investigations (hematological, biochemical, and radiological) done before treatment. The staging, histopathology, and treatment were analyzed.

Statistical Analysis

Using the multivariate analysis, the association among age of the patient, clinical stage, histopathology, and treatment was studied. Using the Statistical Package for the Social Sciences software statistics, version 18, data were analyzed using the descriptive statistics and frequency analysis. Cross-tabs were created between clinical staging and histopathology of carcinoma cervix.

RESULTS

During the study period, a total of 151 cases of carcinoma cervix were managed accounting for 47% of all gynecological cancers.

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About 96% of the patients belonged to low socio-economic status. The common clinical presentation was discharge per vagina and postmenopausal bleeding

DISCUSSION

The study revealed that the incidence of carcinoma cervix is 47%, which almost represents the national data of Bangladesh.¹ Most of the carcinoma cervix patients were diagnosed at an advanced stage and similar observation was made by Dinshaw et al.²

In India, cancer cervix is one of the leading cancers and cause of death in women, hence emphasis should be given on screening and early diagnosis.³ Community sensitization and institution of countrywide screening programs will go a long way in reducing the incidence of this cancer among our women.⁴

Human papilloma virus (HPV) testing is another method utilized in developed countries which can be used among the developing countries.⁴ But its use may be limited by the cost and availability of the test kits.⁴ Keeping all these problems with tests, an attempt can be made on primary prevention using HPV vaccination. Ideally, HPV vaccination should cover a high percentage of the target population (preadolescent girls) if well implemented.⁴ But the weak and improperly coordinated health systems may not support wide-scale immunization.

Ideally, a combined strategy utilizing primary prevention in the form of HPV vaccination and secondary prevention in the form of screening and treatment of precursor disease is required.

The preinvasive stage lasts for a long period, and only a small proportion of cervical intraepithelial neoplasia (CIN) progresses to an invasive lesion.⁵

Majority of the patients were between 40-49 yrs constituting 39.07% (Table 1 and Graph 1). In our study carcinoma cervix was more in parous women. 33.7% were para 5 and above (Table 2 and Graph 2).

The major presenting symptoms were vaginal discharge and postmenopausal bleeding. This is similar to findings from other studies (Uzoigwe and Seleye-Pubara 2004; Ijaiya et al. 2004; Olantuji and Sule-Odu 2005).^{1,6,7} Discharge per vagina was seen in 52.98% (Table 3 and Graph 3).

Majority of our patients presented to us in stage III. 50% of the patients presented with stage III disease (Table 4 and Graph 4). This is similar to the study done in Nigeria. Most of the carcinoma cervix patients were diagnosed at an advanced stage & similar observation was made by Sankaranarayanan et al.⁸

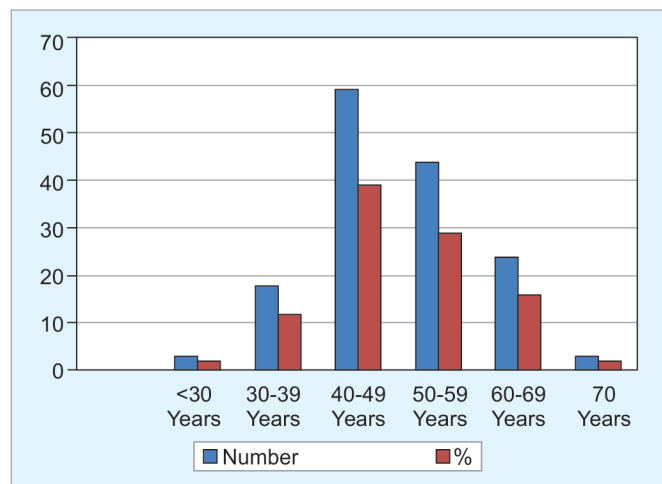
Analysis of the histopathological pattern revealed squamous cell variety and of large cell type. This was the histopathology in majority of the studies done in

Table 1: Age distribution of the patients

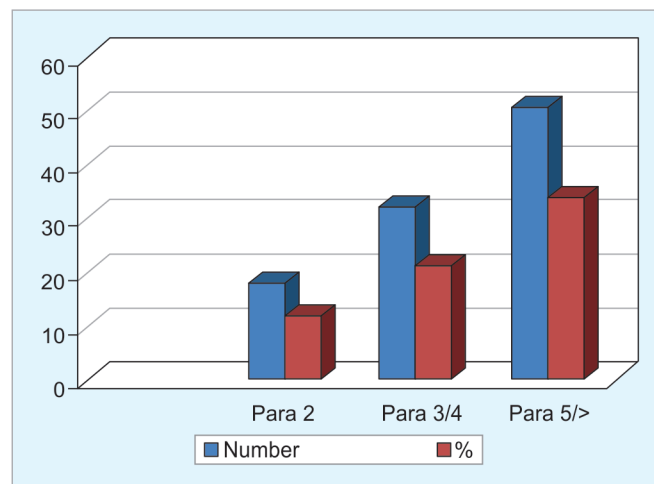
Age group (years)	Number	Percentage
<30	3	1.98
30-39	18	11.92
40-49	59	39.07
50-59	44	29.13
60-69	24	15.89
>70	3	1.98

Table 2: The parity distribution. The majority of the patients were grand multipara

Parity	Number	Percentage
Para 2	18	11.9
Para 3/4	32	21.19
Para 5/>	51	33.77



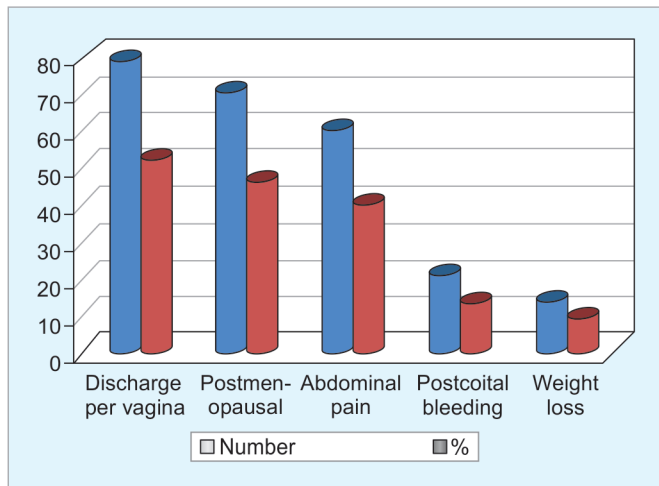
Graph 1: Age distribution of patients



Graph 2: Parity distribution

Table 3: Clinical symptoms with which the patients presented to the hospital

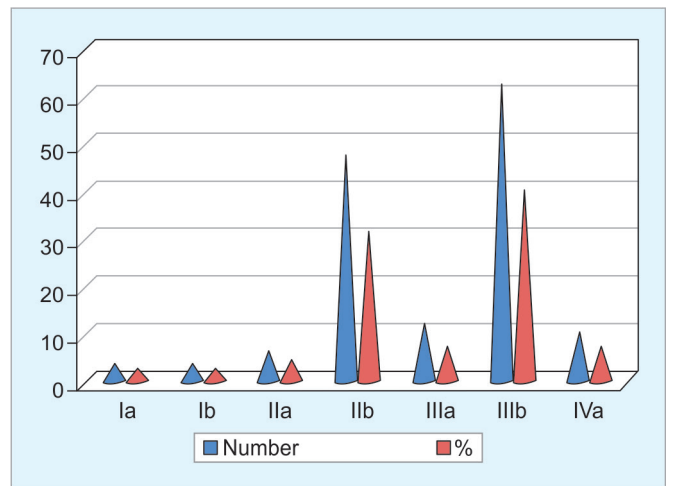
Symptoms	Number	Percentage
Discharge per vagina	80	52.98
Postmenopausal bleeding	71	47.01
Abdominal pain	61	40.39
Postcoital bleeding	21	13.90
Weight loss	14	9.27



Graph 3: Distribution of patients based on symptoms

Table 4: Clinical stage at the time of presentation

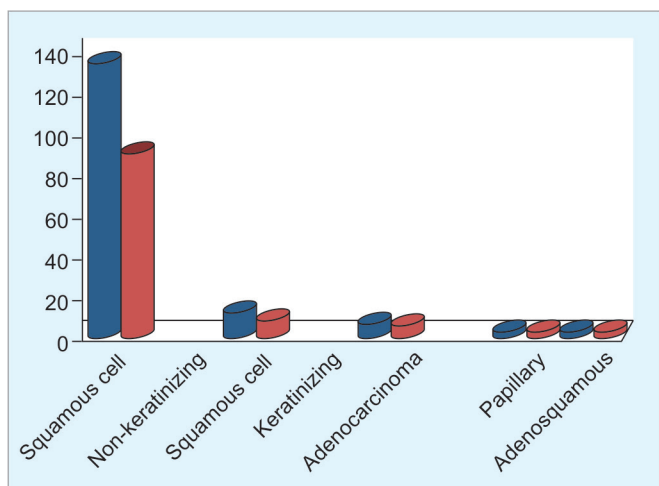
Stage of presentation	Number	Percentage
Ia	4	2.64
Ib	4	2.64
IIa	7	4.63
IIb	49	32.45
IIIa	12	7.94
IIIb	63	41.72
IVa	11	7.28



Graph 4: Distribution of patients based on stage at the time of presentation

Table 5: Histological types of cervical carcinoma. Among them, 95.36% were of squamous cell carcinoma of large cell variety

Histological type	Number	Percentage
Squamous cell carcinoma (large cell nonkeratinizing)	134	88.74
Squamous cell carcinoma (large cell keratinizing)	10	6.62
Adenocarcinoma well differentiated	5	3.31
Papillary adenocarcinoma	1	0.66
Adenosquamous carcinoma	1	0.66



Graph 5: The histological types of carcinoma cervix

Table 6: Treatment modality received

Modality of treatment	Number	Percentage
Radiotherapy plus chemotherapy	130	86
Palliative radiotherapy	11	7.28
Surgery	9	5.96
Surgery + radiation therapy and chemo	1	0.66

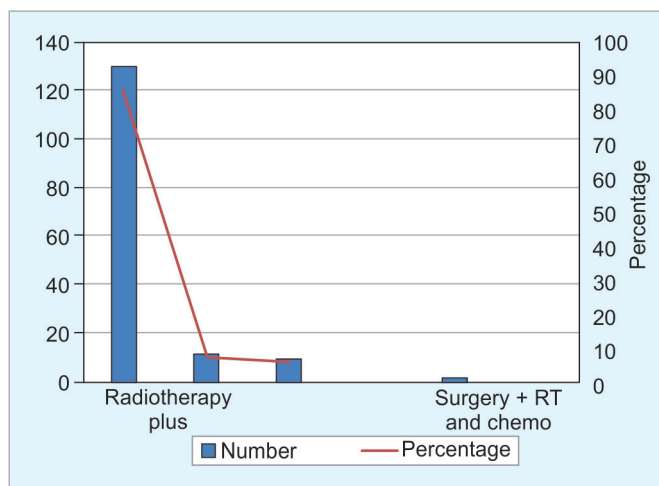
the developing countries. Our study revealed 88.74% had squamous cell carcinoma, large cell nonkeratinising (Table 5 and Graph 5).

As majority of the patients presented to us in the late stage, 86% (Table 6 and Graph 6) radiotherapy was the main treatment modality. Radiotherapy was EBRT of 4500 cGY in 25 fractions. The surgical treatment was Wertheim’s hysterectomy. Chemotherapy was platinum based. Palliative care was EBRT30GY in 10 fractions.

The study revealed that the incidence of carcinoma cervix is 47% which almost represents the national data of Bangladesh.⁹

CONCLUSION

In conclusion, major steps need to be taken to decrease the incidence of carcinoma cervix. Early diagnosis of the preinvasive stage by screening and appropriate treatment



Graph 6: Distribution based on modality of treatment

should be instituted at the preinvasive stage. Health education about family planning is to be advised. Screening program should be made free of cost or at affordable cost. Radiotherapy units are to be made available at least in major districts of all states and this will help in reducing the incidence and mortality due to carcinoma cervix. A major breakthrough will be to make compulsory HPV vaccination to all preadolescent girls, thereby helping to reduce the incidence of carcinoma cervix in future.

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