

## ORIGINAL ARTICLE

# Clinical profile and treatment protocol of invasive carcinoma of cervix

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### Abstract

*Cervical cancer is the most common prevalent cancer that continues to be a major health care problem world wide. It is still an important cause of mortality and morbidity in the developing countries. An estimated 500,000 new cases of cancer cervix and 233,000 deaths occurred in the year 2000 and almost 80% of these cases happen in the developing countries. Hospital based statistics indicated cervical cancer constitutes 22-35% of the female cancer in different areas of Bangladesh and India. A retrospective study was done in Gynaecology and Obstetric department in KMCH between January 2004 to January 2009 to see the incidence, correlation of age, parity, socioeconomic condition and clinical staging, treatment and other risks factors of carcinoma cervix. Out of total 120 diagnosed cases of cervical cancer were evaluated regarding their clinio-demographic profile, appearance of growth, clinical staging and types of treatment done . The results showed 49% of patient were in the age group of 31-40 years, 26% were in the 41-50 years group, early age at first coitus (70%), most of the patients (82%) presented with advanced stage and referred for radiotherapy or chemo radiation. One in ten female cancers diagnosed world wide are cancers of the cervix and there is seven fold variation in the incidence of cervical cancer between the different regions of the world. The Incidence of invasive cervical carcinoma can be reduced by development of health education and promotion of national screening programme such as Visual Inspection of cervix (VIA), Colposcopy and vaccination against Human Pappiloma Virus (HPV).*

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### Introduction

Cervical cancer is the most prevalent cancer that continues to be a major health care problem worldwide. It is still an important cause of mortality and morbidity in the developing countries. An estimated 47, 000 new cases of cervical cancer and 223,000 death occurred in the year 2000.<sup>1,2</sup> Incidence appears to change from one locality to another, however from various studies.<sup>1,4</sup>, there is no doubt that it is the most common gynecological cancer in many developing countries. Cervical cancer constitutes about 21-23% of the female cancer in different areas of India and Bangladesh.<sup>3-7</sup> Incidence in India varies from 20-35 per 100,000 women between the ages of 35 years and 64 years. In the developed countries the incidence is as low as 1-8 per 100,000 women. In Bangladesh no population based study is available regarding the prevalence. Prevalence of cervical cancer in developing countries is related to many risk factors as early marriage, early starting of sexual activity, multiparity, low socioeconomic condition and high incidence of Sexually Transmitted Diseases and HPV infection.<sup>8-9</sup> Data collected from different hospitals reveal that Cervical cancers is the commonest cancer in Bangladesh. Seventeen thousand and nine hundred and sixty six cancer cases (male 12,062 and female 5, 904) presented to the Department of Radiotherapy of Dhaka Medical College Hospital during the period of 1985-91. Among the females 24%

had Cervical cancer. Several studies established HPV infection as a sexually transmitted disease and major risk factor for development of Cervical Intraepithelial Neoplasia (CIN) and Invasive Cervical cancer (ICC).<sup>10-11</sup> Research also showed that over 90% of cervical cancers world wide contained HPV DNA. Invasive cervical cancer is often asymptomatic, although patients may report vaginal discharge and post coital bleeding. The diagnosis of invasive disease is usually made by biopsy of a lesion visible on gross pelvic examination.

### Methodology

**Clinical trial design:** This observational study was done in Gynaecology and Obstetric department of Khulna Medical College Hospital between 1st January 2004 to 30th January 2009 and after obtaining informed consent from all participants. Study participants were recruited from the women who are diagnosed as invasive cervical carcinoma and attended gynaecology department of Khulna Medical College Hospital. Objective of the study is to analyze the incidence and risk factor of Invasive cervical carcinoma (ICC).  
**Eligibility criteria:** Histopathologically diagnosed cases of Invasive cervical carcinoma. Both early and advanced stages of cancer cervix were included. A total 120 cases of Invasive cervical carcinoma were evaluated regarding their clinicodemographic profile,

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appearance of growth, clinical staging and types of treatment done.

Study interventions: Patients were diagnosed as invasive cervical carcinoma according to the criteria as history, clinical sign, symptoms, and histopathological examination of cervical tissue. Demographic, Medical history, Laboratory tests, clinical presentations and mode of treatment data are collected. Demographic variables include age, parity, age at first marriage, socioeconomic condition. Medical history data includes association of other medical diseases such as Hypertension, Diabetes, Heart disease. Laboratory data recorded at the time of study entry include preoperative VIA screening test. Surgical staging was done under general anaesthesia and other accessory investigation such as Ultrasound, Intravenous Pyelography, and Cystoscopy. Data were collected from 120 women with histologically diagnosed cervical cancer attending the gynaecology outpatient department of KMCH. The stage of the disease was assessed clinically according to the criteria of International Federation of Gynaecology and Obstetrics ( FIGO). The study questionnaire included age of women, education, age of first marriage, age at first delivery.

## Results

A total of 120 cases of Invasive cervical carcinoma were evaluated regarding their clinico-demographic profile, appearance of growth, clinical staging and types of treatment done.

**Table I**

Age of the study population (n=120)

Age group	Number of cases	Percentage
21-30	15	24
31-40	49	62
41-50	32	26
51-60	16	13
61-70	8	7

Carcinoma of cervix accounted for 63.1 histological confirmed gynecological cancers. Table I shows base line characteristics of study populations. Most of the patients (49 - 62 %) were in the age group of 31-40 years. 26% were in the 41-50 years group (Table-I).

**Table II**

Marital status of the patient (n=50)

Marital status	Number of cases	Percentage
Married	90	75
Unmarried	2	2
Widow	28	23

Table II shows marital status of the patients. Most of the patients were married 90 (75%).

**Table III**

Risk factors for the population (n=120)

Risk factors	Number of cases	Percentage
Age of first intercourse (<15 yrs)	52	47
Multiparity (>than 4)	70	60
Age of Marriage (<15 years)	46	40
Low socio economic group	80	66
High risk male partner	25	21
Multiple sex partner	8	7
Oral contraceptive pill use	24	20
Smoking	2	2
Obesity	15	12
Sexually transmitted disease	8	7

Table III shows risk factors for the study population. The disease is associated with high parity with grand multiparous patients constituting 70 (60%) of the cases. (Table III) Early age at first coitus (70%) was the most commonly identified risk factor followed by multiparity and low social class (66%). Table IV shows type of presentations in different stages.

**Table IV**

Types of presentation in different stages (n=120)

Presentation	Stage I	Stage II	Stage III
Blood stain vag dis	8	45	15
Post coital bleeding	12	43	6
Foul smell vag dis	10	32	4
Backache	0	6	12
Haematuria	0	0	4

Blood stained vaginal discharge 45, postcoital bleeding 43, and foul smelling vaginal discharge 32 were the common symptoms (Table-IV). 41(82%) of the patients were presented with advanced stage (inoperable) and were referred for radiotherapy or chemoradiation. While 25 (21%) were undergone Wertheims operation followed by radiotherapy. 50% of invasive cervical carcinoma were in Stage IIa, and 26% were in stage IIb. Radiotherapy and chemoradiation were given in 62 ( 52% ) cases.

## Discussion

Cancer cervix is the most important cause of malignant deaths in females of Bangladesh and has annual incidence about 11956.12 The scenario is similar to other developing countries where effective screening programme is not established. Among the total global cancer cervix (4,68000 ) 80% occur in developing countries.13 The incidence of 63.1% carcinoma of the

cervix of all histologically confirmed gynecological malignancies in this study is similar to the 62.7% and 72.6% obtained at Ibadan and Maiduguri, both in Nigeria respectively.<sup>14</sup> In all probability the first symptom of early cervical cancer is thin watery blood tinged discharge that frequently goes unrecognized by the patient. The frequency with which Invasive cancer cervix occurs is not known exactly but the best incidence indicate a rate approximately 8-10/100,000 per year.<sup>15</sup> The peak age of incidence is in the fifth decade which is similar to the findings of Pindiga et al and FIGO report of 1986.<sup>16</sup> The age range distribution of our patients is not different from results obtained in another studies.<sup>17,18,19</sup> In this study irregular vaginal bleeding was the earliest presenting symptom. In this study 75% of the patients had advanced disease due to late presentation. Stage III was the most common presentation which is similar to the experience from Kumasi, Ghana. Although the primary prevention of cervical cancer is the main objective of preventive efforts, but screening remains the most effective weapon against cervical cancer.<sup>20</sup> The Indian Council of Medical Research initiated a network of Cancer Registry Program (NICRP) in 1981.<sup>21</sup> Based on the data Population Based Cancer Registry (PBCRS), the estimated number of new cancers during 2007 in India was 90,708.

The relative five year survival reported average 48.7 percent.<sup>22,23</sup> A case controlled study conducted in Chennai, India found an almost 500 fold increase in the odds of having cervical cancer in cases with any HPV infection relative to controls with no HPV infection (Francheschi et al, 2003). High parity (3 births or more ) increases the risk of Cervical cancer by 51% compared to women with no births. The five year survival rate of cervical cancer when detected at the earliest stage is 92% and the combined five year survival rate for all stages is 71% (American Cancer Society 2009).

The highest incidence of cervical cancer is observed in Latin America, Caribbean, sub-Saharan Africa, South and South East Asia.<sup>24</sup> Incidence in India varies from 2035 per 100,000 women between the ages of 35 years and 64 years. In the developed countries the incidence is as low as 1-8 per 100,000 women. In Bangladesh no population based study is available regarding the prevalence. Data collected from different hospitals reveal that cervical cancer is the commonest cancer in Bangladesh. Seventeen thousands and nine hundred and sixty six cancers cases (Male 12, 062 and female 5,904) presented to the Department of Radiotherapy of DMCH during the period of 1985-91. Among the females 24% had cervical cancer. Lower education has significant influence on development of cervical cancer. Higher level of secondary education was found to a considerable reduction of Cancer cervix in Kerala of India.<sup>25</sup> Olsen et al (1995) also showed that low

educational level contributed independently to the risk of Cervical cancer.<sup>26</sup> The low income group may be related to high incidence of early marriage, high parity, low attendance to physician and make this vulnerable for the development of Cervical cancer.

Therefore for primary prevention, behavior modification through women empowerment and consciousness about their own reproductive health is important. Improvement of economic status of family and education level of the female population may have a strong positive effect in reducing the number of cancer cervix. Bangladesh has a comprehensive health infrastructure which offers the possibility of introducing screening programme. Furthermore the highly successful Family planning programme has encouraged awareness regarding women's health and related issues.

### Conclusion

Cancer cervix is potentially preventable and curable. Women who remain most susceptible to the development of cervical cancer are those who are lost to screening or who do not receive screening at all. A national health policy regarding screening, diagnosing and treating precancerous condition of the cervix earlier is of immense importance.

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