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Original Article

Screening Of Cervical Precancer in a Tertiary Care Hospital in Bangladesh

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Abstract:

Background: Cervical cancer is the second most common cancer among women in Bangladesh. Cervical cancer is a preventable disease as it has a long precancerous stage. Routine and effective screening detects the disease at its precancerous stage and can reduce the incidence of cervical cancer by almost 80%. Visual Inspection of the cervix with 5% acetic acid allows for inspection of the ace to-white area (VIA Positive).

Objective: To evaluate cervical preconcert screening in tertiary level hospital of Bangladesh.

Methods: This cross-sectional study was conducted in the gynecology Department of Sir Salimullah Medical College and Mitford Hospital, Dhaka from January 2018 to December 2019. Women who came for cervical cancer screening by VIA were included in this study. A total of 1023 women were included in this study. VIA-positive cases were evaluated in colposcopy clinics where the 'see and treat' policy applied. The specimen was sent for a Histopathology examination.

Results: Among 1023 women, 92 were VIA positive (8.99%). Colposcopy test among VIA positive women, 21 (22.82%) were normal, 39 (42.39%) were CIN-1 and 29 (31.52%) were CIN-2 & CIN-3, 3 were unsatisfactory (3.26%). In CIN-1, cryotherapy was given to 21 patients. LEEP was done in 18 patients of CIN-1, all 29 patients of CIN-2 & CIN-3. The histopathology report showed chronic cervicitis with squamous metaplasia in 15 patients, CIN-1 in 20 patients, CIN-2 in 8 patients, CIN-3 in 3 patients and invasive cancer in 1 patient.

Conclusion: VIA is safe and feasible in our country. The hopeful news is that women are eager to gather knowledge about carcinoma cervix. We will achieve the goal of reducing the mortality rates associated with cervical cancer.

Keywords: Cervical precancer, VIA, Colposcopy.

Introduction

Cervical cancer is the fourth most frequently diagnosed cancer and the fourth leading cause of cancer death in women, with an estimated 604,000 new cases and 342,000 deaths worldwide in 2020.[1] Cervical cancer isthe second most prevalent cancer among Bangladeshi women with approximately 8068 new cases detected every year and 5214 deaths.[2] Approximately 90% of deaths from cervical cancer occurred in low and middle-income countries. Rate of cervical cancer have been estimated to be at least four-fold higher in countries with a "Low" ranking Human Development Index compared to dose with a "Very high" Human Development Index.[3] Effective primary prevention is by education and HPV vaccination at the age 9-13 years. Secondary prevention approaches by screening among women 30-60 years and tertiary prevention by treatment of precancerous lesions in women of 30-60 years of age will prevent most cervical cancer cases. According to World Health Organization (WHO) estimates, cervical cancer is expected to kill more than 443,000 women by 2030, with a high rate (over 98% of deaths) believed to occur in developing countries (especially in Sub-Saharan Africa (SSA). Non-communicable diseases such as cervical cancer cause devastating effects in developing countries.[4] It can be prevented, unlike other reproductive cancers through effective screening programs.[5] CIN represents a spectrum of neoplastic changes of the squamous epithelium of the cervix that

has been recognized as precursors of invasive squamous cell carcinoma. Diagnosis of CIN is established by histopathological examination of a cervical punch biopsy or excision specimen Consequently, CIN is histologically graded on a scale from I to III.[6] Progression through different grades of CIN to CIS or CC may take several decades. The time lag between infection and development of CC is probably en average more than 15 years.[7] Due to importance of high grade cervical intraepithelial neoplasia (CIN), as precursor to invasive cervical cancer, it is the vital to accurately screen patients for the risk of this lesions. Human papillomavirus is causative factor of carcinoma cervix. It has more than 100 subtypes among them type 16 & 18 are the major risk factor.

Based on gynaecology guidelines, colposcopy examinations arc performed in women with abnormal cervical screening report to evaluate the cervical histopathology.[8] All the tertiary level hospitals are caring a large load of cervical cancer patient. Visual Inspection of the cervix with 5% acetic acid allows for inspection of the aceto-white area (VIA Positive). Women with VIA positive tests are referred for colposcopy. Successful screening program is one of the effective way for early diagnosis and prevention of this cancer. Treatment of Pre-cancerous lesions in women will prevent most cervical cancer cases.Visual inspection by Acetic Acid (VIA) is our national program. It is cheap, widely available and easy to perform.

Materials & Methods

This was a cross sectional study that was conducted in the Gynaecology Department of Sir Salimullah Medical College and Mitford Hospital, Dhaka from January 2018 to December 2019. Women who came for cervical cancer screening by VIA were included in this study. Women who have previous surgery, chemotherapy or radio therapy for cervical disease or neoplasia, pregnant women, confirmed diagnosis of invasive cervical cancer were excluded in this study. A total number of 1023 women age group 20-60 years were included in this study.

All women were counseled. There informed written consent was taken for VIA, colposcopy and colposcopy directed procedure. Data was collected in a pre-designed data collection sheet. VIA-positive cases were evaluated in colposcopy clinic where the 'see and treat' policy applied. The specimen was sent for histopathological examination.

Result

Out of 1023 patient, 495 (48.38%) were the age group of 30-39 years.

Table-I: Age distribution of the study population

Age in years	Frequency	Percentage
20-29	89	8.69%
30-39	495	48.38%
40-49	275	28.88%
59-60	164	16.03%

Early age of marriage, early sexual activity is one of the major risk factor for ca-cx, 190 (18.57%) got married before the age of 15 years, 614 (60.01%) at 15-20 years of age.

90 (8.79%) had their first child before 15 years, 601 (58.74%) between 15-20 years. 421 (41.15%) hade 1-2 child and 302 (29.52%) had 3-4 child.

Table-II: Regarding the risk factors of cervical cancer

Age of marriage	Frequency	Percentage
<15	190	18.57%
15-20	614	60.01%
>20	219	21.40%

Age of first pregnancy	Frequency	Percentage
<15	90	8.79%
15-20	601	58.74%
>20	332	32.45%

Number of parity	Frequency	Percentage
Nulliparous	5	.48%
1-2	421	41.15%
3-4	302	29.52%
>4	88	8.60%
Abortion	77	7.52%
MR	130	12.70%

Visual inspection by Acetic Acid shows 92 (8.99%) VIA positive and 931 (91%) VIA negative.

Table – III: Screening by VIA

Screening by VIA	Percentage
VIA Positive	92 (8.99%)
VIA Negative	931 (91.00%)

Out of 92 VIA+ve cases, colposcopic evaluation revealed normal colposcopic finding in 21 (22.82%), CIN-1 in 39 (42.39%), CIN-2 & CIN-3 in 29 (31.52%) cases and unsatisfactory in 3 (3.29%) cases.

Table – IV: Colposcopic findings of VIA positive cases

Findings	Numbers	Percentage
Normal	21	(22.82%)
CIN-1	39	(42.39%)
CIN-2, CIN-3	29	(31.52%)
Unsatisfactory	3	(3.26%)

Cryotherapy was given in 21 patient in CIN-1. LEEP was done in 18 cases of CIN-1, 29 cases of CIN-2 & CIN-3.

Table – V: Treatment given

Treatment	Number of Patient
Cryotherapy	21
LEEP done in CIN-1, 2, 3	47

Histopathological report showed, chronic cervicitis with squamous metaplasia in 15 patient, CIN-1 in 20, CIN-2 in 8, CIN-3 in 3 patients, and invasive cancer in 1 patient.

Table – VI: Histopathology report of specimen

Biopsy finding	Number
Chronic cervicitis with squamous metaplasia	15
CIN-I	20
CIN-II	8
CIN-III	3
Invasive cancer	1

Discussion

Colposcopy is an excellent method for evaluation of cervix.[9] World health organization suggested the priority age group 35-45 years for the CIN screening.[10] In this study 495 (48.38%) were in the age group 30-39 years. Early age of marriage is one of the risk factor of ca-cx. In this study 614 (60.01%) were married between the age of 15-20 years which correspond with the study of RotKIN ID.[11] Multiparty is also a risk factor for CIN of the cervix. This observation correlates with the study of schiffman MH et al. and RotKIN ID.[11,12] Among 92 VIA positive cases, colposcopic evaluation revealed normal colposcopic finding in 21 (22.82%) patient, CIN-1 39 (42.39%), CIN-2, CIN-3 29 (31.52%), unsatisfactory in 3 (3.26%).

Crtotherapy was given in 21 patient of CIN-1. Loop electro surgical excision procedure (LEEP) was done in 47 cases of CIN-1, CIN-2, CIN-3 cases.

Histopathological report showed chronic cervicitis with squamous metaplasia in 15 patients. CIN-1 in 20 patients, CIN-2 in 8 patients, CIN-3 in 3 patients and invasive cancer in 1 patient. Many studies are comparable to my study.[13,14,15]

Conclusions

Precancerous cervical lesions continue to be a significant public health concern in Bangladesh. It will remain a cause of death of women unless effective screening methods like VIA. This implies that clinicians can play a pivotal role in the prevention of advancement of the lesion to cancer as majority of the factors can be identified during early. Therefore, effective prevention approaches have to consider these factors for the control of cervical cancer in early phase of lesions.

The majority of cervical precancerous lesion cases were diagnosed among women who were between her third and fourth decade of life, had low education level, multiparous, had a sexual debut at a younger age. HPV Vaccination, proper screening and early diagnosis can safe the life of women in our country.

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