

Cervical Cancer

Cervical Cancer in Bangladesh

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Introduction

Bangladesh is a densely populated country having a population of 165,158,616 as per the census 2022. Among them 83,347,206 are female and here majority of them (113,063,587) lives in rural area.¹ The allocation of health sector budget is 2.34% of gross domestic product and in the year 2018, share of 75.3% of the total health expenditure was from private sector with an annual growth of 0.93%.² There is no national cancer registry of the country. As per GOBOCAN 2020, the age-standardized incidence rate of cancer of Bangladesh is calculated as 106.2 and the case load of cancer in Bangladesh was 1,56,775 and the cancer death was 1,08,990.³

Cervical cancer is the fourth most common cancer globally among women. In the year 2020, an estimated 6,04,000 new cases and 3,42,000 deaths were recorded. Alarming 90% of these new case and deaths occurred worldwide in 2020 were in low- and middle-income countries. The annual number of global new cases of cervical cancer has been projected to increase between 2018 and 2030 from 570,000 to 700,000 and the annual number of deaths projected to increase from 311,000 to 400,000.⁴

In Bangladesh, cervical cancer is the second most common cancer of female (12%).³ The number of new cases was 8,068 (10.6 per 100,000 women) and deaths was 5,214 (7.1 per 100,000 women) in 2018.³ The prediction was that without any intervention a total of 505,703 women in Bangladesh will die from cervical cancer by the year 2070 and the number will rise to 1,042,859 by 2120.⁵

The Government of Bangladesh (GOB) is giving due emphasis to noncommunicable disease (NCD) to achieve the target of sustainable development goal where cervical cancer management is considered as an important component of NCD. Both the government and private sectors are working together to fight against cervical cancer.

Screening and HPV Vaccination

Government adopted cervical cancer screening by visual inspection of cervix with acetic acid (VIA) method following the World Health Organization (WHO) recommendation for resource constrain countries.⁶ This screening program was extended to all districts and selected Upazillas. The screening program has been implemented by capacity building of service providers at medical college hospitals, district hospitals, mother and child care welfare centers and selected Upazilla health complexes and several institutes. VIA was performed at approximately 417 VIA centers at primary, secondary, and tertiary level health care facilities of 64 districts of Bangladesh and VIA-positive cases are referred to colposcopy clinic for further evaluation and management.⁷

According to the WHO, the screening guideline of Bangladesh recommends screening of women above 30 years of age with a screen coverage between 30 and 60 at every 5 years. Only 7.5% women aged between 30 and 49 years age group had gone under cervical screening in their lifetime according to Health Bulletin 2019. According to “World

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Health Organization - Cervical Cancer Country Profiles, 2021" the screening of cervical cancer in last five year is 5% and the rate of ever screened is 7%.

A dissemination report was printed in the year 2022 by National Center for Cervical and Breast Cancer Screening and Training, Bangabandhu Sheikh Mujib Medical University (BSMMU). According to this unpublished report, current total VIA center number is 570 and around 24 hundred thousand women were screened between 2017 and 2022 with a screening coverage and positivity rate of 11.30% and 5.71.

The initiative for human papillomavirus (HPV) vaccination in Bangladesh was first taken by Emeritus Professor ABMF Karim, chairman of Oncology Club, Bangladesh, with financial support from Grameen Phone Limited. Ten girls were vaccinated first time on December 27, 2008 under a pilot project for the vaccination of 100 girls that was led by Sabera Khatun, Head of the Division of Gynaecological Oncology of BSMMU.⁸

The GOB introduced the HPV vaccine in the country in the year 2016 with the support of Global Alliances for Vaccination and Immunizations. A pilot project of school-based vaccination was undertaken to vaccinate 10 years old girls in primary school at selected Upazilas.⁹ The GOB took a policy decision to incorporate HPV vaccination as a part of Expanded Program on Immunization (EPI) in middle of 2023.

Surgical Management of Cervical Cancer

Internationally recommended treatment for cervical cancer is available at limited government and private centers.¹⁰ National Institute of Cancer Research & Hospital (NICRH), BSMMU, and Dhaka Medical College Hospital are the three main government centers. A few private hospitals also have designated gynecological oncology department offering this service.

As per hospital-based registry of NICRH, 95.8% cervical cancer patients presented with inoperable advance stage that is a very big barrier to get favorable outcome of cervical cancer treatment.¹¹ General OBGYN specialist of the country without proper training ends up with incidental diagnosis of cervical cancer creating a challenge for further treatment. Lack of trained manpower, infrastructure with radiology, and proper pathology facilities is the main barrier to expand these specialized surgical services to the remote part of the country. Noncompliance to postoperative referral for adjuvant treatment and irregular follow-up is a very common challenge faced by the treating physicians.

One fellowship and one master program on gynecological oncology started in the year 2013 and 2017, respectively. Till now total only 43 qualified in Gyn Oncology under this postgraduate program. A few OBGYN specialist with training on this subject from home and abroad are also offering this specialized surgical treatment.

Nonsurgical Management of Cervical Cancer

External beam radiation therapy (EBRT) and brachytherapy with or without chemotherapy are the treatment options for medically inoperable patients or who refuses surgery.¹² It is

estimated that RT improves 5-year overall survival of cervical cancer patients by 17% over and above the contribution of surgery and chemotherapy.¹³ Bangladesh needs 160 teletherapy machines to meet the requirement as per recommendation of International Atomic Energy Agency.¹⁴ A personal survey revealed that at present country has total 39 EBRT machines (linear accelerators—26 and cobalt—60—13) and 19 brachytherapy machines offering RT treatment through 24 RT centers (government—15 and private—9). Most of the centers (14) are located at Dhaka, the capital of the country causing an uneven distribution of the existing RT facilities. In addition to inadequate RT facilities, nonadherence to protocol-based treatment, not respecting the principle of total treatment time, and lack of three-dimensional image-guided brachytherapy practice are the main barriers to achieve the optimum treatment outcome with RT.

The GOB took a project to establish 100-bed comprehensive cancer center at eight division headquarters equipped with required RT equipment and adequate manpower of all relevant disciplines including radiation, medical, and gynecological oncology to disseminate standard cancer care across the whole country.

There are around 250 qualified radiation oncologists in the country trained to deal with both radiation and medical oncology. Besides 22 qualified medical oncologists are also offering their service.

All the chemotherapeutic agents including immunotherapy required for cervical cancer treatment are available in the country. Many local pharmaceuticals companies are manufacturing generic anticancer drugs. This is creating opportunity for larger number of patients to use anticancer drugs at an affordable cost.

Conclusion

Cervical cancer is a preventable disease with rewarding treatment outcome even at higher stages. We need to go a long way to eliminate this disease from our country. Nationwide HPV vaccination and wider screening program are warranted to ensure prevention and early diagnosis of cervical cancer.

Increasing the number of treatment facilities in both government and private with arrangement to ensure more trained and qualified physician will ensure optimum treatment for diagnosed cervical cancer patients.

The WHO made a forecast that Bangladesh could eliminate the cervical cancer by 2051. We are optimistic that with the current trend Bangladesh will achieve the target much earlier than WHO forecast.

Conflict of Interest

None.

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