



PREVENTION OF CERVICAL CANCER

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ABSTRACT

Cervical cancer is the fourth most common cancer in women globally. In 2018, 570.000 women were diagnosed with cervical cancer, and 311.000 of them died from the disease.¹ In Indonesia, cervical cancer is the second most common cancer. According to GLOBOCAN, there was a decrease in incidence from 17.2% to 9.2% from 2018 to 2020. This decrease has also been seen in other countries such as the United States. However, the distribution of cervical cancer varies widely among countries. WHO projected that the global burden of cervical cancer is projected to continue to increase, rising to 700 000 cases (21% increase) and 400 000 deaths (27% increase) in 2030 compared to 2018. Preventive measures become an important step to manage this situation. Preventions such as HPV vaccination, screening, and treatment of precancerous lesions have been found to be effective.

Keywords: Cervical Cancer, Prevention



INTRODUCTION

According to World Health Organization (WHO), cancer is the leading cause of death globally. Cervical cancer is the fourth most common cancer in women. In 2018, it was estimated that 570.000 women were diagnosed with cervical cancer, and 311.000 of them died from the disease.¹ In Indonesia, cervical cancer is the second most common cancer. According to GLOBOCAN 2018, the new cases of cervical cancer were 32.469 (17.2%), causing 18.729 (8.8%) deaths.² In 2020, the incidence decreased to 9.2% (36.633 new cases). However, the mortality slightly increased to 9.0% (21.003 mortalities).³ A decrease in incidence has also been found in many other countries, such as the United States.⁴ However, the distribution of cervical cancer varies widely among countries, with >85% trends in incidence and mortality burden occurring in low-income and middle-income countries. WHO projected that the global burden of cervical cancer would continue to increase, rising to 700 000 cases (21% increase) and 400 000 deaths (27% increase) in 2030 compared to 2018.¹ Preventive measures become an important step to manage this situation. Several new tools of primary prevention (HPV Vaccination) and secondary prevention (screening and treatment of precancerous lesions) have been found to be effective.⁵

DISCUSSION

WHO has developed a global strategy to eliminate cervical cancer with a target of 4 per 100.000 women-years in all countries. Preventive measures include HPV vaccination, screening, and treatment of precancerous lesions.

HPV Vaccination

Human papillomavirus (HPV) becomes the primary cause of precancerous and cancerous cervical lesions, with types 16 and 18 as the most responsible for 70% of cases of cervical cancer worldwide. Vaccination of adolescent girls is considered the most effective long-term intervention for reducing the risk of cervical cancer.¹ WHO and American Cancer Society (ACS) recommends vaccination as below:

- According to WHO, adolescents aged 9-14 years to receive two doses of HPV vaccine to be fully protected.¹
- According to ACS, vaccination could be given from 9, mostly recommended for 11-12 years old, and can be given up to 26 years old. ⁶
- Catch up doses is not recommended for individuals 26-45 years old due to its low effectiveness and low prevention in this age group. ⁶
- The HPV vaccine is not licensed to be used in population >45 years old.⁶

Screening and treatment of precancerous lesions

Secondary prevention is implemented to reduce cervical cancer incidence and mortality by identifying and treating women with precancerous lesions. Cytology-based screening has been successfully used. Women starting from 30 years old are recommended



to start screening, and priority should be given to women 30-49 years old.⁷ However, in low-income countries, this facility is still minimal. Pap smear has been proven to decrease cases and mortality of cervical cancer.¹ Visual Inspection of the Cervix with Acetic Acid (VIA), Visual Inspection of the cervix with Lugol's iodine (VILI), and screening of HPV test becomes various organizations in the world have recommended the alternative.^{1,8}

Cryotherapy is the first-choice treatment for women who have screened positive and are eligible for cryotherapy (the entire lesion is visible, the squamocolumnar junction is visible, and the lesion does not cover more than 75% of the ectocervix). If not eligible, LEEP becomes the alternative treatment.⁷

Cytology based screening (Pap Smear) has relatively good specificity and is considered affordable to some. However, there is a high rate of subjectivity and false-positive results. VIA can decrease 30% cervical cancer mortality. However, sensitivity and specificity are limited, 49-98% and 75-91%, respectively, risk overdiagnosing and overtreatment. HPV test has a better performance than the VIA and cytology test and has a higher sensitivity than the VIA test.⁸

WHO recommends screening intervals as below⁷:

- Women who test negative on VIA or Pap Smear: Every 3-5 years
- Women who have received treatment: Post-treatment follow up at one year
- Women who test negative with HIV-positive status or unknown HIV status in areas with high endemic HIV infection: Every three years

CONCLUSION

Cervical cancer remains a crucial problem and is predicted to increase in 2030. Preventive measures to eradicate cervical cancer, including vaccination, screening, and treating precancerous lesions, is necessary.



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