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Editorial

Cervical Cancer Screening – Looking Back and Beyond

Swasti*

Consultant Gynaecology Oncology, Max Cancer Centre, Max Super Specialty Hospital, Vaishali, India

***Corresponding Author:** Swasti, Max Cancer Centre, Max Super Specialty Hospital, Vaishali, India.

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Prolegomenon

Cervical cancer is the fourth most common cancer in women globally, and the seventh overall, with an estimated 528,000 new cases in 2012 [1]. There were an estimated 266,000 deaths from cervical cancer worldwide in 2012, accounting for 7.5% of all female cancer deaths [1]. Almost nine out of ten (87%) cervical cancer deaths occur in the less developed regions[1]. Cervical cancer is a near preventable disease. Together, cervical cancer screening and the HPV vaccine could prevent as many as 93% of all cervical cancers [2]. Timely screening leads to detection of early warning signs and provides an opportunity for institution of correct management in the precancerous stage. The frequency of screening and the choice of the test used have been under debate by health care providers, physicians, researchers and women themselves. The aim today is to maintain a balance between benefits of early detection and perils of over-testing.

The Journey of Cervical Cancer Screening

Pap smear was introduced in the late 1920s as a screening test for cervical cancer and has been widely used since then. Time wears things down – but this does not seem to hold true for Pap smear. Despite of high false negative rates, cervical cancer incidence decreased with time. 1976 witnessed the publication of the Nobel award winning hypothesis "HPV is involved in causing cervical cancer." By the end of the 20th century, carcinogenicity was linked to high risk HPV types 16 and 18. Cervical cancer screening was recommended every three years at that time. Very soon, liquid based cytology emerged as a new and more efficient tool for screening. The role of persistent carcinogenic HPV infections virtually underlying all cases of cervical cancer became well established. Testing for HPV thus became an attractive proposition for detecting cervical cancer. Quadrivalent HPV vaccine was introduced in 2006 along with a new test to detect HPV – the HPV DNA test. Trends drifted from only a conventional Pap smear to liquid based cervical cytology and finally co-testing.

Evolution of Screening Guidelines

U.S. Preventive Services Task Force Recommendation (USPSTF), American Cancer society (ACS), American College of Obstetricians and Gynecologists (ACOG) and American Society for Colposcopy and Cervical Pathology (ASCCP) after a consensus conference agreed on recommendations for routine cervical cancer screening [3]. Routine screening was recommended to commence at age 21, despite of HPV vaccine administration. Women aged 21-29 years were advised Pap test screening every 3 years. Women aged 30-65 years had the option of either having a Pap test every 3 years, or having a Pap test plus an HPV test (co-testing) every 5 years. More frequent screening did not provide more protection. Routine screening was not recommended after the age of 65 years, given a history of normal screenings. Women with a history of CIN2 or a more severe diagnosis were advised to continue routine screening for at least 20 years. Screening was not recommended after a total hysterectomy and in the absence of a history of high-grade precancerous lesions. These recommendations were for routine screening and some women may need an individualized screening schedule because of their health history or previous screening results.

Where Do We Stand Today?

In 2015, guidelines[4] were issued stating that "primary hrHPV (high risk HPV) screening can be considered as an alternative to current US cytology-based cervical cancer screening methods. Cytology alone and co-testing remain the screening options. Primary hrHPV screening should not be initiated prior to 25 years age. Re-screening after a negative primary hrHPV screen should occur no sooner than every 3 years." At present, there are four FDA approved hrHPV assays that are commercially available, but only one of these assays is now

FDA-approved specifically for primary screening. The American College of Physicians (ACP) issued its best-practice advice5 for cervical cancer screening in April 2015. ACP specifically recommends against testing more often than every three years in average-risk women age 21 to 65. It says clinicians may use co-testing - Pap plus HPV test - once every five years for women over 30.

Conclusion

Cervical cancer is nearly preventable but the challenge of screening exists. Women need to be sensitized towards cervical cancer screening. Although, numerous clinical and research questions still exist, an attempt needs to be made to identify women unscreened for cervical cancer. Gaps in screening need to be bridged to save women developing and dying from cervical cancer.

"Time is what prevents everything from happening at once". – Albert Einstein

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