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Cervical Cancer Kills One Indian Women Every 7 Minutes

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Abstract:

Worldwide, cervical cancer kills one woman in every 2 minutes. India ranks fourth in the incidence of cervical cancer and accounts for 1/3 of the global burden of cervical cancer. It's sober to think that one Indian woman dies of cervical cancer every 7 minutes. (WHO 2010). Every year cervical cancer is diagnosed in about 500,000 women globally and is responsible for more than 280,000 deaths annually. The primary reason for the high incidence is lack of access to screening and health services, and lack of awareness of the risk factors of cervical cancer.

Keywords: Cervical cancer, cervical cancer screening, visual inspection tests

1. Introduction

Cervical cancer is one of the most common cancers among women worldwide. The burden of cervical cancer is much higher among women of low socio economic status as well as among rural women in India. Since over 70% of the Indian population resides in the rural area, cancer cervix still continuous the no 1 cancer in females (Nanda Kumar, et al 2010). Thus the burden of these debilitating diseases is highest in the most disadvantage sections of Indian society.

2. Prevalence of Cervical Cancer in India

Health ministry of India released the data based on the National Cancer Registry Programme (NCRP) report in 2009, in which the numbers of cervical cancer cases were 101938 which has increased to 107690 in 2012. The highest incidence was reported in Uttar Pradesh a total of 17367 cases in 2009 and it increased to 18692 in 2012. Next to Uttar Pradesh the highest numbers of cases of cervical cancer in 2012 were in Maharashtra (9892), Bihar (9824), West Bengal (8396), Andhra Pradesh (7907), Tamil Nadu (7077) and others.

Ambika Satija stated that cervical cancer mostly affects middle aged women (between 40 and 55 years) especially those from the poor economic status who fail to carry out regular health checkups due to lack of knowledge regarding screening of cervical cancer and financial inadequacy.

3. General Concepts of Cervical Cancer

According to National Cancer Institute 'Cancer refers to a class of disease in which a cell or a group of cells divide and replicate uncontrollably, intrude into adjacent cells and tissues (invasion) and ultimately spread to other parts of the body than the location at which they arose (metastasis). Cervical cancer refers to proliferation of abnormal cells most commonly malignant cells that develop in the tissues of the cervix.

There are several types of cervical cancer, classified on the basis of where they develop in the cervix. Cancer that develops in the ectocervix is called squamous cell carcinoma, and around 80-90% of cervical cancer cases (more than 90% in India) are of this type (WHO/ICO information centre on HPV and cervical cancer). Cancer that develops in the endocervix is called adeno carcinoma. As per American Cancer Society, a small percentage of cervical cancer cases are mixed versions of the above two, and are called adenosquamous carcinomas or mixed carcinomas

4. Natural History/Classification of Cervical Cancer

Alliance for cervical cancer prevention, Cancer Research, UK Cervical cancer begins with the development of pre-cancerous, benign lesions in the cervicular area. According to WHO classification, the first stage of development is mild dysplasia, which can then

progress to becoming moderate dysplasia, severe dysplasia, and then carcinoma in situ (CIS) or invasive cervical cancer. Mild dysplasia usually regresses on its own without treatment, and does not progress to moderate or severe dysplasia.

5. Causes and Risk Factors for Cervical Cancer

The main cause for the development of Cervical Cancer is Human Papilloma Virus (HPV) infection. HPV is a sexually transmitted infection. There are various types of HPV infection like HPV 16, 18, 31, 33, 35, 52 and 58. Among these, HPV 16 and HPV 18 are the most common types which contribute 70% of all cervical cancer cases.

Peedicayil A, et.al. analysed that there are other risk factors which leads to developing cervical cancer includes multiparty, long term use of oral contraceptives, uninterrupted copper-T use more than 5 years, sexually transmitted infections, HIV infection, smoking / tobacco chewing, genital warts, poor hygienic conditions, reproductive tract infections and low intake of fruits and vegetables due to low socio economic status.

6. Signs and Symptoms of Cervical Cancer

There are mainly 4 signs and symptoms of cervical cancer.

1. Haemorrhage: Irregular bleeding, bleeding between periods, post coital bleeding, post menopausal bleeding spotting after straining such as defecation and micturation.
2. Leukorrhoea: Excessive white vaginal discharge in a woman, sometimes it may be blood stained or will have offensive odour.
3. Cachexia: It is a condition of extreme debility. It is well marked in advanced growths. The patient is emaciated, the skin being loose and wrinkled from rapid muscle wasting, sunken eyes, pale mucous membrane, anaemia, loss of appetite and sickness.
4. Pain: Pain nearly always a late symptom. Pain occurs when the growth spreads to other areas. Knee pain, leg pain and back pain are common.
5. Other symptoms: Arises in late cases and includes symptoms such as painful and frequent micturation, incontinence of urine, painful defecation and pruritis because of vaginal discharge.

7. Early Detection of Cervical Cancer

There are 3 common methods used for screening the cervical cancer, these are

1. Visual inspection tests
2. Papsmear test
3. Colposcopy

7.1. Visual Inspection Tests

To perform visual inspection test, two methods are used. These are Visual Inspection with acetic acid (VIA) and Visual Inspection with Lugol's Iodine (VILI) test. The test results are interpreted as normal cervix or abnormal cervix.



Figure 1: Normal

Abnormal (VIA Positive)

Suspicious for Cancer

7.2. Papsmear Test

If VIA or VILI test result is positive the woman is referred for papsmear test for further confirmation of precancerous cervical lesions. In papsmear test, the cervical cells are scrapped at 360 angle rotation using simple device called spatula. These scrapped cells are spread on a glass slide and a special staining technique is done in the laboratory to find out whether the cervix is healthy or infected or in the premalignant stage (dysplasia) or even cervical cancer.

7.3. Colposcopy

Colposcopy is an examination of the cervix using a binocular magnification microscope. This helps in identifying the normal or diseased area better and takes a biopsy. Colposcopy facilitates the clear visualization at the site of cancer cervix and also to make early and accurate diagnosis of precancerous lesions⁵¹.

8. Preventive Strategies of Cervical Cancer

8.1. Health Promotion & Education

According to WHO report on comprehensive cervical cancer control, health education and promotion should be an integral part of any national cervical cancer control programme. It should incorporate an awareness component, informing women and/or their families about risk factors and preventive measures of cervical cancer.

8.2. HPV Vaccine in India

HPV vaccine (Gardasil) is available in India which protects from HPV types 16/18, vaginal and vulval cancers, genital warts and precancerous lesions. The recommended age for HPV vaccination is between 11 - 26 years or with consultation of the Gynaecologist. Three doses should be given over a period of 6 months. Single dose cost INR 2800, 3 doses INR 8400 (available at Vaccine world pharmaceuticals, Anna Nagar, Chennai.)

8.3. Cervical cancer screening

Since HPV vaccine does not provide protection against other HPV strains, the most effective way of preventing and controlling cervical cancer is regular screening and early diagnosis.

9. Conclusion

Since early detection predicts better prognosis, the most effective ways of preventing and controlling cervical cancer are regular cervical cancer screening above the age of 30 years and educational strategies to create public and social awareness about the disease.

10. Reference

1. Global status report on non communicable diseases. Burden, mortality and risk factors. World Health Organisation. 2010.
2. AmbikaSatija, Cervical cancer in India, South Asia Centre for Chronic Disease. 2009 Alliance for cervical cancer prevention. Natural history of cervical cancer: Even infrequent screening of older women saves lives. Cervical cancer prevention Fact sheet, April 2003.
3. The Economic Times: India tops cervical cancer deaths: US study, New Delhi: May 2013.
4. National Cancer Institute, U.S. National Institutes of Health. Cancer topics NCI website.
5. Peedicayil A, Thiagarajan K, Gnanamony M, Pulimood SA, Jeyaseelan V, Kannangai R, Lionel J, Abraham OC, Abraham P. Prevalence and risk factors for human papillomavirus and cervical intraepithelial neoplasia among HIV-positive women at a tertiary level hospital in India. *Journal Lower Genital Tract Diseases*. 2009 Jul; 13(3):159-64.
6. PratibhaMasand. Cervical cancer kills one Indian in every 7 minutes. *The times of India*, Feb 4, 2012.
7. Sankaranarayanan R and Wesly RS. A practical manual on visual screening for cervical neoplasia. International Agency for research on cancer, technical report no. 41 WHO, 2003.
8. RevathyAnanth. To save the cervix from cancer you should know the facts. The federation of Obstetrics & Gynaecological societies of India (FOGSI).
9. AhmedinJemal, Freddie Bray, Melissa M, et al., Global cancer statistics. *CA: A cancer journal for clinicians*. 2011.
10. WHO / ICO on Human papilloma virus (HPV) and cervical cancer. summary report 2009
11. Nandakumar A, Ramnath T, Chaturvedi M. The magnitude of cancer cervix in India. *Indian Journal of Medical Research*. 2009 Sep; 130(3):219-21.
12. Christe DM, Mohanambal M, Ramamurthy V, Sneha NB. A study of cervical cancer screening for prevention of carcinoma cervix. *Journal of Indian Medical Association*. 2008 Dec; 106(12):779-80, 782.
13. The Economic Times: India tops cervical cancer deaths: US study, New Delhi: May 2013.
14. Ardahan M, Temel AB. Visual inspection with acetic acid in cervical cancer screening. *Cancer Nursing*. 2011 Mar-Apr; 34(2):158-63.
15. Srivastava S, Gupta S, Roy JK. High prevalence of oncogenic HPV-16 in cervical smears of asymptomatic women of eastern Uttar Pradesh, India: a population-based study. *Journal of Bioscience*. 2012 Mar; 37(1):63-72.
16. Vinodhini K, Shanmughapriya S, et al. Prevalence of high-risk HPV and associated risk factors in cases of cervical carcinoma in Tamil Nadu, India. *International Journal of Gynaecology Obstetrics*. 2012 Dec; 119(3):253-6.