



Women and Cancer Cervix - Can it be Prevented?

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Carcinoma cervix is the third most common cancer in women worldwide and the second most common cause of cancer related deaths in women in developing countries. In India it contributes to 16.5% all cancers in women, every year about 1.2 lakh women are diagnosed and more than 65000 die from carcinoma cervix.

Good part of cancer cervix is that it is preventable. In most of the cancers we don't know the cause but for cancer cervix, human papilloma virus (HPV) infection especially HPV- 16 and HPV- 18 plays a major role in etiology of cancer. Early marriage, multiple sexual partners, multiparity, sexually transmitted infections (STI's) are high risk for HPV infection. Various measures for prevention are.

Awareness

The target is whole population and purpose is to educate them about the cancer, its various risk factors and vaccination for cancer cervix through health education and media sources

- Awareness against early marriage and early pregnancy
- To avoid multiparity
- Adolescent education for avoiding early sex and promoting safe sex practices
- To promote Monogamous relation
- Educating about STIs and various contraceptive methods like condoms
- Promoting healthy lifestyle, nutrition, exercise and avoiding smoking
- Awareness about vaccination for cancer cervix
- Awareness for regular screening visits for cancer cervix

- Awareness about early signs of cancer cervix, when a female should consult her gynecologists apart from her regular screening visits.

Signs of cancer cervix are-

- Post coital bleeding
- Any abnormal vaginal bleeding or menstrual irregularities
- Post menopausal bleeding
- Foul smelling discharge per vaginum
- Weight loss, fatigue

Vaccination

As cancer cervix is caused by HPV, vaccinating against oncogenic HPV strains is also very important and useful preventive method. HPV vaccines is made by recombinant technique, are highly immunogenic but not infectious.

HPV vaccines are given between 9 to 26 years, preferably, before start of sexual intercourse. These vaccines can be given to girls and boys both. HPV vaccines can be given simultaneously with other vaccines such as hepatitis B and Tdap. Various type of HPV vaccines are -

- Bivalent Vaccine: Protects against HPV 16 and 18, Dose 0, 1, 6 months, Route intramuscular 0.5 ml
- Quadrivalent Vaccine: Protects against HPV 6,11,16 and 18, Dose 0, 2, 6 months, Route intramuscular 0.5 ml.
- Nanovalent Vaccine: Protects against HPV 6,11,16,18,31,33,35,52 and 58.

Side effects

No major adverse reactions are documented with vaccine.

Pain and erythema at the injection site, mild fever, post vaccination syncope.

Contraindication

Do not administer in person with history of hypersensitivity, with acute illness or younger than 9 year.

Screening for cancer cervix

This is to diagnose the cancer in pre-invasive stage (CIN 1,2,3) or early stages of disease, which can be treated. Various screening methods are

- **Gynecological inspection:** Routine gynecological inspection for any complaint like abnormal bleeding per vaginum or abnormal discharge per vaginum.
- **Pap smear:** This a very easy and cost effective method of screening and should be started after beginning of sexual activity and then done yearly. The results are given according to the Bethesda system and further management can be done accordingly.
- **HPV testing:** In women more than 30 years of age HPV DNA testing can be done along with pap smear 3 yearly (if negative then can be reduced to 5 yearly).

Screening Schedule

- Start screening with pap smear from 21yr age (earlier if sexually active) and is done 3 yearly, there after till 65 years of age.
- Women with immunosuppressive conditions like HIV to be screened annually.
- Between 30-65 years screening can be done by pap smear alone 3yearly or by co testing (PAP + HPV) 5 yearly.

Visual inspection screening of cervix

- Unaided inspection of cervix is used in developing countries like India. In this cervix is visualized using a speculum and good light source, any abnormalities including any small growth, suspicious looking areas and erosions which bleed on touch if seen the patient can be referred to higher center, for this health workers at periphery are also trained.

- Visual inspection with acetic acid (VIA) performed by applying dilute acetic acid 3-5% to the cervix and examining after 1minute by naked eyes or using colposcope. Acetic acid caused dehydration of the abnormal tissues which appears as aceto white area on examination.
- Visual inspection with Lugol's iodine(VILI) performed by applying 5% lugol's iodine to the cervix and examining immediately with naked eyes or colposcope. Normal tissues stain dark mahogany brown while abnormal epithelium does not stains due to lack of glycogen.

As carcinoma cervix is more problematic in resource poor countries and developing countries including India, the above mentioned methods of prevention at various levels shall help in preventing, diagnosing and treating the cervix better and improving the health of women of the country.