GENERAL

Cervical Cancer Decoded: A Woman's Guide To Early Detection And Prevention

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Introduction

Cervical cancer is the fourth most common cancer among women worldwide.1 The incidence and mortality (death) rates of cervical cancer are higher in middle- and low-income nations. Every year, more than 500,000 new cases of cervical cancer are diagnosed, with an estimated 250,000 deaths worldwide. Nearly 80% of all cases occur in developing countries.2

Having a basic understanding of cervical cancer is important for everyone, especially women. This could help with early detection and be a life-saving preventive measure.

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What is cervical cancer?

Cervical cancer develops in the cervix part (neck of the womb) of the female reproductive system. The cervix connects the uterus (also known as the womb—where the baby develops and grows) and the vagina (birth canal). Cervical cancer can develop at any age, but it most commonly affects women in their early or mid-thirties.

Cervical cancer develops gradually and over time. It starts with abnormal cell growth (dysplasia) in the cervix. If these abnormal cells continue to grow without being removed in time, they can develop into cancerous cells. They spread deeper into the surrounding area and the cervix with time.

Many factors contribute to the growth of abnormal cells. This abnormal growth turns cancerous over a period of time. Before we get into the details of cervical cancer, let us take a look at some of the causes.

Understanding the causes of cervical cancer

The majority of cervical cancer cases develop from long-lasting infection with high-risk type human papillomavirus (HPV).HPV16 and HPV18 are the two common high-risk types of virus. These both lead to 70% of cervical cancer cases worldwide.

HPV is a sexually transmitted infection. It is common for almost every sexually active individual to get infected once with HPV at some point. The infection is naturally cleared by the body's immune system. If this persists for a longer duration, it can lead to the development of abnormal cell growth and cancer.

It is important to note that abnormal cells take approximately 15-20 years to become cancerous. However, certain factors can increase a woman's risk of developing cervical cancer. These risk factors are:

Having a weak immune system

Women living with HIV (human immunodeficiency virus) are more likely to develop cervical cancer compared to women without HIV. Women who take medications for autoimmune disorders (when the immune system mistakenly attacks and destroys healthy body tissue) are more likely to develop cervical cancer.

Reproductive factors

- Women who have been through multiple pregnancies or have given birth to multiple children.
- Prolonged use of oral contraceptives.
- Early pregnancy or indulging in sexual activities at a younger age.
- Having multiple sexual partners.

Cigarette Smoking

Indulging in the habit of cigarette smoking can expose a woman to carcinogenic (cancer-causing) chemicals. These substances can raise the risk of cervical cancer by entering the bloodstream.

Exposure to diethylstilbestrol (DES)

Diethylstilbestrol (DES) is a synthetic form of the female hormone estrogen. During the time period 1940-1971, it was prescribed to pregnant women in the United States. DES was given to prevent miscarriages, premature labor, and other complications related to pregnancy. (3)

Studies4 conducted in the 1950s declined the effectiveness of DES in resolving pregnancy-related issues. It continued to be used to stop lactation, provide emergency contraception, and treat menopausal symptoms in women. In 1971 researchers found a link between prenatal (the phase when the fetus is in the womb) DES exposures and cervical cancer. Afterwards, the Food and Drug Administration (FDA) banned the use of DES in pregnant women.

What are the symptoms associated with cervical cancer?

Cervical cancer in its early stages can cause few or no symptoms, resulting in early-stage cancer. A few symptoms that are observed include:

- Irregular, heavy, or prolonged periods
- Vaginal bleeding following sexual intercourse, menopause, and in between periods.
- Vaginal discharge: watery and strong in smell
- Pain in the pelvic region
- Pain during sexual intercourse

These early-stage symptoms may be confused with hormonal imbalances. So, consultation with an expert becomes important to understand the reasons behind the above-mentioned symptoms faced by women.

The symptoms of cervical cancer in its later or advanced stages, when the cancer has spread to surrounding areas, are different. These include:

- Bowel movements that are difficult or painful.
- Bleeding from the rectum (the end of the large intestine or the area where a person holds stool before excreting it from the body).
- Pain while passing urine, blood in the urine
- Dull backaches,
- Pain in the abdominal area
- swelling in the legs.

If you experience any of these symptoms at any time, consult your doctor. Cervical cancer screening can help to prevent or detect the disease early.

Early detection is the key to survival

It is important for every woman to undergo periodic cervical screening. It helps in early identification and detection of cervical cancer.

Cervical screening serves the purpose of timely detection of any abnormality in the cells of the cervix. Cervical cancer detected at an early stage is usually easier to treat. By the time symptoms appear, cervical cancer may have spread, making treatment more challenging.

Screening for cervical cancer can be done in three ways:

- The human papillomavirus (HPV) test
- The Pap test (also called a Pap smear or cervical cytology)
- The HPV/Pap cotest

These tests primarily check the cervical cells for infection as well as any changes that may be occurring within the cells.

A number of groups5, including the American Cancer Society (ACS) the United States Preventive Services Task Force (USPSTF), and the Indian Council of Medical Research (ICMR) in India have created cervical screening guidelines. Your age and medical history will determine how frequently you should get screened for cervical cancer. You can consult with your doctor and make an informed decision.

When to see a doctor?

Cervical cancer can be prevented and is curable if diagnosed timely. A basic understanding and knowledge, timely vaccination, regular screening, and early medical intervention can help prevent this condition.

Vaccines for its prevention have been available since 2006. HPV vaccination is a safe and effective way to help prevent cervical cancer. It becomes important to vaccinate timely.

What is the right time to get the HPV vaccination?

Here are some recommendations from the Centers for Disease Control and Prevention (CDC) about the best time to get an HPV vaccination:

- It is advised to begin routine HPV vaccination at age 11 or 12 (vaccination can begin at age 9).
- The CDC also recommends vaccination for everyone up to age 26 if they are not adequately vaccinated as children. HPV vaccination is given in a series of two or three doses, depending on the age at the time of the initial vaccination.
- Vaccination is not recommended for everyone older than age 26 years because HPV vaccination provides less benefit to people in this age range. The main reason behind this is that more people in this age range have already been exposed to HPV.
- Some adults aged 27 to 45 may decide to get the HPV vaccine after consulting with their doctor if they were not adequately vaccinated when they were younger.

In addition to the abovementioned guidelines and steps, taking the following personal precautions can help stop the condition from developing:

- Safe sexual practices (use of condoms).
- Lifestyle modifications, like giving up smoking.

Summary

Cervical cancer is a major health concern among females of all ages globally. It can be prevented and treated if detected early. Several countries have been making consistent efforts to eradicate it globally. As responsible individuals, we can keep every woman safe from this serious health problem. Remember that being aware of this condition and screening regularly can help detect and treat it on time.

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Competing interests

The authors declare that they have no competing interests.

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