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RADIATION THERAPY DURING CERVICAL CANCER

Abstract

Cervical cancer is the second most common type of cancer among women and 98% of cancer is caused by HPV (Human Papilloma Virus). It is known that at least 1 out of every 100 women will develop cervical cancer at some point in their life. However, with the measures taken against cervical cancer, the rate of women not encountering cancer throughout their lives is very high.

The HPV (“Human Papilloma Viruses”) virus, which is responsible for almost all cervical cancers, does not show many symptoms and is highly contagious. Most women defeat the HPV virus they encounter at some point in their lives with the help of their own body defense system. Some HPV viruses come out of this defense system strong and can cause cervical cancer. Taking precautions to prevent the HPV virus that causes the disease and having regular health checks and screenings helps to detect the disease before it occurs or in the early stages of the disease and to be successful in the treatment.

Keywords: *cervical cancer, Human Papilloma Viruses, virus, genital*

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Uşaqlıq boynu xərçəngi zamanı radioterapiya

Xülasə

Uşaqlıq boynu xərçəngi qadınlar arasında ən çox gəlinən ikinci xərçəng növüdür və xərçəngin 98%-i HPV (Human Papilloma Virus) səbəb olur. Məlumdur ki, hər 100 qadımdan ən azı 1-i həyatının bir dönməndə uşaqlıq boynu xərçənginə tutula bilər. Ancaq uşaqlıq boynu xərçənginə qarşı görülən tədbirlərlə qadınların həyatı boyu xərçənglə qarşılaşmama nisbəti çox yüksəkdir.

Demək olar ki, bütün uşaqlıq boynu xərçənglərinə cavabdeh olan HPV (“Human Papilloma Viruss”) virusu çoxda simptomlar göstərmir və yüksək yoluxucudur. Qadınların çoxu həyatlarının bir nöqtəsində qarşılaşdıqları HPV virusunu öz bədən müdafiə sisteminin köməyi ilə məğlub edirlər. Bəzi HPV virusları bu müdafiə sistemindən güclü çıxır və uşaqlıq boynu xərçənginə səbəb ola bilər. Xəstəliyə səbəb olan HPV virusunun qarşısını almaq üçün tədbirlər görmək, müntəzəm sağlamlıq müayinələrə keçmək xəstəliyin baş verməmişdən əvvəl və ya xəstəliyin ilkin mərhələsində aşkarlanmasına və müalicəsində müvəffəqiyyətli olmasına kömək edir.

Açar sözlər: uşaqlıq boynu xərçəngi, insan papilloma virusları, virus, tənəsül

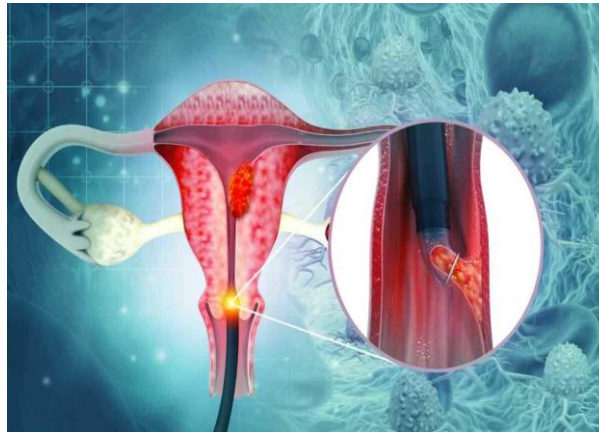
Introduction

The cervix, which is the lower part of the uterus, connects the uterus and vagina. As the cervix, the cervix plays an important role in allowing fluids to pass between the uterus and vagina. It also allows the baby to pass through the vagina and leave the uterus during delivery.

Like many cancers, the exact cause of cervical cancer is unknown (Tekbash, 2014). Only certain factors can facilitate the formation of cervical cancer and accelerate the disease process. In general, the risk factors for cervical cancer are as follows:

- to be polygamous
- starting sexual intercourse before the age of 20
- to smoke
- weak immune system.
- frequent viral and bacterial infections in genital organs
- having a low socioeconomic level
- vitamin C and Vitamin A deficiency

Adenocarcinoma. There are different types of cervical cancer. Many types of cervical cancer can be encountered, such as adenocarcinoma and invasive cancers such as squamous cell carcinoma (Ege, 2014). Among cervical cancers, adenocarcinoma is a relatively aggressive type of cancer that is more difficult to detect and less common. Adenocarcinomas usually form in the inner canal of the cervix, rather than on the outer surface of the cervix. Smear tests use cell samples on the outer surface. Therefore, when the diagnosis of adenocarcinoma is made, the cancer is usually in an advanced stage (T.C.Ministry of Health Health Statistics Yearbook, 2015: 7-36). More adenocarcinomas occur with HPV types such as 16, 18, 45 and 31 that cause cancer.



Symptoms of cervical cancer may not manifest itself in the early stages. Even in the gynecological examination, the problem in the cervix may not be seen. After the high-risk HPV screening test, which is the cervical cancer screening test, is positive, or abnormalities are detected in the vaginal swab called the smear test, changes can be noticed with instruments that enlarge the cervix called "colposcope", and the definitive diagnosis can be made with a biopsy taken from the suspicious area (Aref-Adib, Freeman-Wang, 2016; Eroglu, Keshli, Eryilmaz, Unlu, Gonench, Chelik, 2011; Sonay Kurt, Canbulat, Savasher, 2013).

Symptoms of cervical cancer occur more often in the advanced stages of the disease. Symptoms such as bloody discharge, bleeding after sexual intercourse and irregular menstrual bleeding are among the symptoms of cervical cancer. In advanced cases, the tumor can be noticed even during examination. As cervical cancer progresses, urinary problems, defecation difficulties and leg pain may occur (Tashkin, 2012: 43-67).

One of the symptoms of cervical cancer, bleeding that occurs unexpectedly immediately after sexual intercourse or the next day is called "postcoital bleeding". Postcoital bleeding is an important finding and may be an early sign of cervical cancer (Applause Kochturk, 2010).

Genital warts caused by HPV are not considered a sign of cervical cancer. Because some types of HPV cause genital warts, while some types cause changes in the cells of the cervix in women. However, due to the fact that genital warts are noticed and possible high-risk HPV types may be present, a detailed examination and HPV typing must be done. A cervical swab is taken to find out if the person has HPV infection. According to the results of the examination, whether there is an HPV infection and if there is, the type can be determined (Finocchario-Kessler, Wexler, Maloba, Mabachi, Ndikum-Moffor, Bukusi, 2016).

Causes of cervical cancer include multiple births, having sexual intercourse at an early age, having multiple partners and smoking. HPV infection has been observed in 98% of cervical cancer patients. There are more than a hundred types of HPV, which is usually transmitted by sexual intercourse. In particular, types 16 and 18 cause cervical cancer, while types 6 and 11 cause warts on the genital organs.

Conditions such as polygamy, sexual intercourse before the age of 20, smoking, weak immune system, frequent viral and bacterial infections in genital organs, multiple births, low socioeconomic level, vitamin C and vitamin A deficiency are among the risk factors for cervical cancer is counted (Ozturker, Sonmez, 2015; Erdemir, 2014).

The process leading to cervical cancer proceeds as cervical cancer after CIN 1, CIN 2, CIN 3. In the first stage, 70-90%, 40-45% in the second stage, and 30-35% in the third stage, spontaneous regression can be seen in the disease. In patients who do not receive any treatment, the disease turns into advanced cancer over years. In the early stages, there is no need to remove the uterus, and complete recovery can be achieved by partially removing the cervix with simple surgical procedures called LEEP, conization. These patients may become pregnant and have a baby after treatment.

Cervical cancer stages can be listed as follows;

Stage 0: The abnormal cells are in the innermost layer of the cervix.

Stage I: Cancer cells are found only in the cervix. Tumor size can vary between 3 mm and 4 cm.

Stage II A: The cancer has spread beyond the cervix to the upper two-thirds of the vagina, but has not spread to the tissues around the uterus.

Stage II B: The cancer has spread beyond the cervix to the upper two-thirds of the vagina and the tissues around the uterus.

Stage III A: The cancer has spread to the lower part of the vagina but not to the pelvic wall.

Stage IIIB: The cancer has spread to the pelvic wall or has invaded the ureters, the tubes through which the kidneys connect to the bladder, obstructing the passage of urine and causing enlargement of the kidneys.

Stage IV: The cancer has spread outside the cervix to the bladder, rectum, or other parts of the body.

Cervix cancer vaccine.

Sexually transmitted HPV can cause cervical cancer. To protect against HPV, it is recommended that girls and boys and adults between the ages of 9 and 26 should be vaccinated against cervical cancer. Although 3 vaccines (9, 4 and 2 vaccines) have received FDA approval and are being used in the USA, the 9 vaccine has still not arrived in our country. The double vaccine contains virus-like particles of HPV types 16 and 18, which are the most common cause of cervical tumors, and provides immunity against these types, while the quadruple vaccine also contains virus-like particles of HPV types 6 and 11, which cause warts, in addition to these types. It also protects against warts. The latest vaccines, the 9-vaccine, contain virus-like particles of 31, 33, 45, 52 and 58 in other high-risk HPV types in addition to HPV types 6,11,16,18 in the 4-vaccine and cervical It provides a higher level of protection as it provides immunity against more HPV types that cause cancer. These vaccines also provide some immunity against other HPV types by cross-reaction (Ceyhan, 2012).

For children aged 9 to 15 years, 2 doses of the vaccine are sufficient. There should be an interval of 6-12 months between the first and second doses of vaccines. For the 15-26 age group, 3 doses of vaccine are recommended at 0,1 and 6 months. Since the probability of encountering HPV after the age of 26 is high, vaccination is not recommended, but it can be done in appropriate cases by discussing this issue with the physician. HPV vaccine is administered intramuscularly. It can be applied from the shoulder or hip.

Getting the cervical cancer vaccine without ever encountering HPV can prevent most cases of cervical cancer. It is protective in cancers of the vagina and vulva as well as cervical cancer. Types 4 and 9 vaccines can prevent genital warts and anal cancers in men and women. Since some types of HPV are also linked to cancers that develop in the mouth and throat, they also provide protection against these cancers. CDC (The Centers for Disease Control and Prevention) recommends routine HPV vaccination to girls and boys after the age of 9. The ideal vaccination time for the cervical cancer vaccine is the period before sexual experience begins, that is, before contact with the HPV virus. When HPV is infected, the vaccine may not be as effective as the recommended time.

Treatment options for cervical cancer are based on the stage of the cancer. Cervical cancer caught in the early stages is relatively easy to treat. In cervical cancer, there are basically three

There were kinds of treatment methods; surgery, chemotherapy and radiotherapy. In fact, it provides the same success as chemoradiotherapy in all stages, but it has negative disadvantages such as inability to protect ovarian functions and negatively affecting sexual life due to fibrosis in the vagina. Therefore, surgery in the early stages and chemoradiotherapy in the advanced stages are more appropriate is an option.

Patients with small, early-stage cancer can be treated surgically with a hysterectomy (removal of the uterus and cervix). Different hysterectomy depending on the spread of cervical cancer types are recommended. In the surgical treatment of cervical cancer, the uterus is removed together with the surrounding tissues and 2-3 cm upper vagina. This is called a radical hysterectomy. In addition, the pelvic lymph nodes, which are the initial spread of the disease, are also removed (lymphadenectomy). Surgery can be performed using conventional open surgery or minimally invasive methods such as laparoscopy or robotic surgery.

Radiotherapy, chemotherapy, or both cervical cancer can also be treated using radiotherapy, chemotherapy, or both to kill cancer cells and prevent them from spreading. Depending on the stage of the cancer, radiotherapy can be administered externally (using a machine outside the body), internally (using a mechanism to deliver radiation directly into or near the cancer), or both.

Chemotherapy uses drugs to kill cancer cells. Chemotherapy drugs enter the circulatory system by mouth or by injecting intramuscularly or intravenously.

The most commonly used treatment in the treatment of cervical cancer is radiotherapy and this treatment is done together with chemotherapy and this is called simultaneous radio-chemotherapy. The chemotherapy drug used here is cisplatin. It is given in half the dose during radiotherapy. The

purpose of administration is to increase the effectiveness of radiation. Radio-chemotherapy can be the first treatment option in cervical cancer, but it can also be applied after surgery in some cases.

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