Cervical Cancer

General information about malignant diseases, their causes and treatment can be found in a more comprehensive text that can be found here.

The cervical cancer is one of the most common and dangerous gynecological cancers. However, modern medicine gives us a great opportunity to prevent the cancer and significantly decrease the number of affected women. First, it is necessary to define the anatomic location where the cervical cancer occurs. What exactly is the cervix? The cervix is simply the lowest part of the uterus that protrudes into the vagina. Throughout the cervix, there leads a narrow hole which connects the cervical cavity with the rest of the uterus. Another important thing is the fact that the cervical cancer is usually preceded by a relatively long-lasting precancerous condition that can be successfully diagnosed in time.
**Causes**

The cause of the majority cases of cervical cancer is known, it is a chronic infection by the human papillomavirus (HPV). The virus is usually transmitted during an unprotected sexual intercourse from an infected man. The family of HPV viruses contains many strains causing a variety of diseases including the skin warts and genital warts. The HPV subtypes responsible for cervical cancer are in most cases the HPV 16 and HPV 18. From the above information can be concluded that sexual promiscuity and early onset of sexual life are important risk factors of both HPV infection and cervical cancer development - the more sexual partners, the greater the chance of HPV infection. Smoking is also reported to be a risk factor.

**Symptoms**

Initially, the cervical cancer has no symptoms. Later, it may cause local abdominal pain and gynecological bleeding. Large tumor mass may compress the ureters and cause disorders of urine flow. A tumor with metastases can cause symptoms such as weight loss, fatigue and loss of appetite.

**Diagnosis**

Precancerous and early cancerous changes of the cervix can be detected during a routine gynecological examination. Since the cervix protrudes into the vagina, its mucosa can be viewed by the naked eye or by a colposcope (a magnifying device inserted into the vagina).

Another important examination is a smear of cervical mucosa and its examination in a laboratory. The cytology of the sample can inform us about cells of the mucosa and help us to evaluate the risk of cancer or precancerous changes.

**Prevention**

The prevention is crucial. Every woman should regularly undergo gynecological examinations with the above-mentioned cervical exam. This approach gives a decent chance to find precancerous mucosal changes before the tumor develops. A relatively new option is vaccination against the cervical cancer. Strictly speaking, this term is nonsense as we cannot vaccinate against cancers. The vaccination is in fact directed against the most common strains of HPV virus and prevents the woman from infection. As the vaccination does not include protection against all possible virus strains, the risk of the disease cannot be totally ruled out and even vaccinated women should undergo regular gynecological check-ups.

In addition, non-promiscuous sexual life and protected sex (using condoms) are very helpful to reduce the risk of infection and cervical cancer.

**Treatment**

The most ideal approach is to treat the precancerous cervical changes. Such stage is treatable by local destruction of the cervical mucosa (electrocoagulation, cervical conization). Later stages of the disease are treated by various combinations of surgical interventions, radiotherapy and chemotherapy. The extent of surgery depends on the severity and local progression of the tumor. Primary radio- and chemotherapy are performed in late stages that are primarily inoperable, or they can be used as secondary therapeutic
methods after a successful surgical removal of the tumor.