

Causes of Origin, Diagnosis and Prevention, Pathoanatomic, Morphological Features of Cervical Cancer

Sadullayeva Laziza Erkinjonovna

Asian International University

Abstract: Cervical cancer is one of the most common oncological diseases among women. If this disease is not detected in the early stages, it can have serious health consequences. In this article, we will look at what cervical cancer is, the symptoms to look out for, what discharge may occur with this disease, and how to prevent it. This article covers the pathoanatomical and morphological features of cervical cancer. Cervical cancer is a malignant tumor that develops from the cells of the cervix. The cervix is the lower part of the uterus, which connects it to the vagina. Most cases of cervical cancer are associated with infection with human papillomavirus (HPV), especially its oncogenic types. The development of the disease can last for years and may begin with cancerous changes detected during routine examinations. The study focuses on the stages of development of this disease, histological types (mainly squamous cell carcinoma and adenocarcinoma), and their microscopic and macroscopic signs. Pathoanatomically, the changes that the tumor process causes in the tissues of the cervix, its invasion of surrounding tissues, and the characteristics of metastasis were analyzed on a scientific basis. The possibility of determining the extent and prognosis of the disease through morphological manifestations was assessed. Research on this topic will serve to improve the diagnostic and treatment process of cervical cancer.

Keywords: uterus, cancer, oncological, microscopic, macroscopic, tissue, squamous cell carcinoma, adenocarcinoma, tumor, prognosis, invasion, metastasis.

Introduction. Cervical cancer is a malignant tumor that occurs in the cervix. This pathology accounts for approximately 15% of all tumor lesions of the female reproductive system. Cervical cancer is the third most common cancer after endometrial cancer and breast cancer. Despite the fact that the disease is quite easily diagnosed, in 40% of patients it is detected at an advanced stage. What is cervical cancer? Cervical cancer is a type of cancer that develops in the cervix, the lower part of the uterus that connects to the vagina. This important part of the female reproductive system serves as a passageway for menstrual blood, sperm, and the embryo. Cervical cancer begins when healthy cells in the cervix undergo abnormal changes, leading to uncontrolled growth, which can eventually form a tumor.

Pathoanatomical features:

Macroscopic appearance: The tumor in the cervix often begins as an erosion, then turns into an infiltrative or exophytic form. An exophytic tumor may be dome-shaped or cauliflower-like in appearance.

Tumor spread: The tumor can metastasize through the cervical canal upward (to the endometrium), downward (to the vagina), laterally (to the parametrium), and to distant organs (liver, lungs, bones).

Pathoanatomical stages: It is assessed in stages from 0 to IV according to the FIGO system. The prognosis worsens as the stage increases.

Morphological features:

Histological types: Squamous cell carcinoma - the most common type (80-90%). It develops from squamous epithelium. Adenocarcinoma - arises from the glandular epithelium of the cervix, is relatively rare. Mixed forms (adenosquamosis) - include both types of cells. **Microscopic signs:** Hyperchromic nuclei, high mitotic activity, cell polymorphism, intercellular bridges are characteristic

of squamous carcinoma. In adenocarcinoma, glandular structures, nuclear polymorphism and cytoplasmic vacuolization are detected.

Diagnostics and significance Pathomorphological analyses (biopsy, histology) - play a key role in confirming the disease and determining its type. Immunohistochemical markers (p16, Ki-67) are used to determine cell proliferation and HPV virus association.

Diagnostics:

- Ultrasound of the bladder
- Ultrasound of the liver
- Ultrasound of the pelvic organs
- Ultrasound of the kidneys
- Colposcopy
- X-ray of the lungs
- X-ray of the colon (Irrigoscopy)
- Gynecological diagnostics

Early diagnosis of cervical cancer is based on oncoprophylactic examination (Paptest) in combination with cytological examination. Risk group The main risk factors for the development of cervical cancer are: non-compliance with personal hygiene rules; old age; irregular sexual intercourse and frequent change of partners; early pregnancy and sexual life (up to 16 years old), when the cervical epithelium is not yet mature; long-term use of hormonal contraceptives that disrupt hormonal balance; sexually transmitted diseases, especially human papillomavirus; smoking (tobacco smoke contains carcinogens); extreme diets and irrational nutrition; the presence of precancerous conditions (dysplasia, erosion); scar changes after abortion.

Common symptoms of cervical cancer As cervical cancer progresses, the following symptoms may occur:

- Abnormal vaginal bleeding Abnormal vaginal bleeding is one of the most common symptoms of cervical cancer. This includes bleeding between periods, bleeding after sex, or bleeding after menopause. Any abnormal bleeding should be evaluated by a healthcare provider.
- Heavy or prolonged menstrual periods Women with cervical cancer may experience unusually heavy or prolonged periods that last longer than usual or are heavier in flow. • Unusual vaginal discharge Another sign of cervical cancer is abnormal vaginal discharge that may be watery, foul-smelling, or blood-tinged. This may be a sign of a cervical infection or cancer-related changes.
- Pain during sex Painful sex, known as dyspareunia, can occur as the tumor grows and affects the cervix. This discomfort may be caused by the cancer's impact on nearby tissues.
- Pelvic or lower back pain As cervical cancer progresses, it can cause persistent pain in the pelvis or lower back, which often indicates that the cancer has spread to nearby organs.

Conclusion. Prevention of cervical cancer is based on women's careful attitude to their own health. Gynecologists recommend: annual gynecological examination; annual colposcopy; cytological examination for atypical cells (PAP-test) once every 3-4 years. Vaccination against cervical cancer with the Gardasil vaccine protects against the human papillomavirus (HPV), which is the main cause of the tumor. Vaccination is carried out in 3 stages and is recommended for girls aged 9-12, but can also be carried out later. Immunity to HPV is maintained for three years. Cervical cancer is one of the urgent problems of modern medicine and is one of the most dangerous oncological diseases that threaten the reproductive health of women in particular. The possibility of early diagnosis increases significantly by in-depth study of the pathoanatomical and morphological features of this disease, identification of the mechanisms of its development, and understanding the composition of tumor

cells. Pathomorphological analyses (biopsy, histological and immunohistochemical methods) are of paramount importance in determining the type of tumor, its degree of differentiation and stage.

REFERENCES

1. Исмаилов Б.Э., Хакимов И.К. Онкология. – Т.: “Ilm ziyo”, 2021. – 448 б.
2. Юнусов Б.К., Мансуров С.А. Патанатомия. – Т.: “Tafakkur-Bo‘stoni”, 2019. – 432 б.
3. World Health Organization (WHO). WHO Classification of Tumours: Female Genital Tumours, 5th Edition. – IARC, 2020.
4. Kurman R.J., Carcangiu M.L., Herrington C.S., Young R.H. WHO Classification of Tumours of Female Reproductive Organs, 4th ed. – IARC, 2014.
5. Arbyn M. et al. "Estimates of incidence and mortality of cervical cancer in 2018: a worldwide analysis." *The Lancet Global Health*, 2020; 8(2): e191–e203.