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CAUSES OF CERVICAL CANCER AND PREVENTIVE MEASURES

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Abstract: Cervical cancer, described above in this article, begins to develop from cells of a certain type of tissue. At the same time, the process progresses rapidly, affecting neighboring organs and tissues. Directly for these reasons, the stages of pathology are also distinguished. The presence of each person's own clinical picture and symptoms is given.

Keywords: Gonorrhea, syphilis, chlamydia, genital herpes, neoplasm.

Cervical cancer is a tumor lesion of the lower part of the uterus characterized by malignant transformation of the integumentary epithelium (ecto- or endocervix). Specific manifestations of cervical cancer are preceded by an asymptomatic course; subsequently, contact and intermenstrual spotting, abdominal and sacral pain, swelling of the lower extremities, urination and defecation disorders appear. Diagnosis of cervical cancer includes examination in mirrors, extended colposcopy, cytological scraping, biopsy with histological conclusion, endocervical curettage. Treatment of cervical cancer is carried out taking into account the histological form and prevalence using surgery, radiation therapy, chemotherapy or a combination thereof.

Cervical cancer (cervical cancer) accounts for about 15% of all malignant lesions of the female reproductive system, ranking third after breast cancer and endometrial cancer. Despite the fact that cervical cancer belongs to diseases of "visual localization", 40% of women are diagnosed with this pathology at a late (III - IV) stage. In Russia, about 12,000 cases of cervical cancer are detected annually. The main category is patients aged 40-50 years, although in recent years there has been an increase in the incidence of cervical cancer among women under 40 years of age.

A key role in carcinogenesis is assigned to papillomavirus infection, which has a tropicity to the epithelium of the cervix. HPV serotypes of high oncogenic risk (16, 18) are found in 95% of cases of cervical cancer: with squamous cell cervical cancer, HPV type 16 is more often detected; with adenocarcinoma and a low-grade form, HPV type 18. HPV serotypes of "low" oncogenic risk (6, 11, 44) and medium risk (31, 33, 35) predominantly cause the formation of flat and pointed warts, dysplasia and rarely cervical cancer.

Other STIs that increase the risk of cervical cancer include genital herpes, cytomegalovirus infection, chlamydia, and HIV. From all of the above, it follows that the probability of developing cervical cancer is higher in women who often change sexual partners and neglect barrier methods of contraception. In addition, at the early beginning of sexual life (at the age of 14-18 years), the immature epithelium of the cervix has a special susceptibility to the effects of damaging agents.

Risk factors for the development of cervical cancer include weakening of the immune system, smoking, age over 40, diets low in fruits and vegetables, obesity, lack of vitamins A and C. It has also been proven that the likelihood of developing cervical cancer increases with prolonged (over 5 years) oral contraceptives,

multiple births, frequent abortions. One of the factors of late detection of cervical cancer is a low medical culture, irregular women undergoing preventive examinations with examination of a smear from the cervical canal for oncocytology.

Background diseases predisposing to the development of cervical cancer in gynecology include leukoplakia (intraepithelial neoplasia, CIN), erythroplakia, warts, polyps, true erosion and pseudoerosion of the cervix, cervicitis.

According to the histological type, in accordance with the two types of epithelium lining the cervix, squamous cell cervical cancer with localization in the ectocervix (85-95%) and adenocarcinoma developing from the endocervix (5-15%) are distinguished. Squamous cell carcinoma of the cervix, depending on the degree of differentiation, can be keratinizing, non-keratinizing and low-grade. Rare histotypes of cervical cancer include light-cell, small-cell, mucoepidermoid, and other forms. Taking into account the type of growth, there are exophytic forms of cervical cancer and endophytic, which are less common and have a worse prognosis.

- To assess the prevalence in clinical gynecology, cervical cancer classifications are used according to two systems: FIGO, adopted by the International Federation of Obstetricians and Gynecologists, and TNM (where T is the prevalence of the tumor; N is the involvement of regional lymph nodes; M is the presence of distant metastases).
- Stage 0 (FIGO) or Tis (TNM) is regarded as preinvasive or intraepithelial cervical cancer (in situ).
- Stage I (FIGO) or T1 (TNM) - tumor invasion is limited to the cervix, without transferring to its body.
- I A1 (T1 A1) is a microscopically detectable cervical cancer with an invasion depth of up to 3 mm with a horizontal spread of up to 7 mm;
- I A2 (T1 A2) – tumor germination into the cervix to a depth of 3 to 5 mm with a horizontal spread of up to 7 mm.
- I B1 (T1 B1) is a macroscopically determined cervical cancer limited to the cervix, or microscopically detectable lesions exceeding IA2 (T1A), not exceeding 4 cm in maximum measurement;
- I B2 (T1 B2) is a macroscopically determined lesion exceeding 4 cm in maximum dimension.

Stage II (FIGO) or T2 (TNM) is characterized by the spread of cancer beyond the cervix; the lower third of the vagina and pelvic walls are intact.

- II A (T2 A) – the tumor infiltrates the upper and middle third of the vagina or the uterine body without germination of the parametrium;
- II B (T2 B) – the tumor infiltrates the parametrium, but does not reach the walls of the pelvis.

Stage III (FIGO) or T3 (TNM) is characterized by the spread of cancer beyond the cervix with the germination of the parametrium to the walls of the pelvis or the involvement of the lower third of the vagina, or the development of hydronephrosis.

- III A (T3 A) – the tumor invades the lower third of the vagina, but does not grow into the pelvic walls;
- III B (T3 B) – the tumor passes to the pelvic walls or causes hydronephrosis, or secondary kidney damage.

Stage IV A (FIGO) or T4 (TNM) is characterized by the spread of cervical cancer to adjacent organs or spread beyond the pelvis. Stage IV B (T4 M1) indicates the presence of distant metastases.

There are no clinical manifestations in in situ carcinoma and microinvasive cervical cancer. The appearance of complaints and symptoms indicates the progression of tumor invasion. The most characteristic manifestation of cervical cancer is spotting and bleeding: intermenstrual, postmenopausal, contact (after sexual intercourse, gynecologist examination, douching, etc.), menorrhagia. Patients note the appearance of whitish - liquid, watery, yellowish or transparent vaginal discharge caused by lymphorrhea. When a cancerous tumor disintegrates, the secretions take on a purulent character, sometimes have the color of "meat slops" and a fetid smell.

When the tumor grows into the pelvic walls or nerve plexuses, pain appears in the abdomen, under the womb, in the sacrum at rest or during sexual intercourse. In the case of metastasis of cervical cancer to the pelvic lymph nodes and compression of venous vessels, swelling of the legs and external genitals may occur.

If the tumor infiltration affects the intestines or bladder, disorders of defecation and urination develop; hematuria or an admixture of blood in the stool appears; sometimes vaginal intestinal and vaginal bladder fistulas occur. Mechanical compression by metastatic lymph nodes of the ureters leads to urinary retention, the formation of hydronephrosis, followed by the development of anuria and uremia. Common symptoms of cervical cancer include general weakness, fatigue, fever, and weight loss.

The basis for early detection of microinvasive cervical cancer is regular oncoprophylactic examinations with cytological examination of cervical scraping. The Pap test (Pap smear) allows you to identify precancerous processes, cancer cells with preinvasive tumor growth. The survey scheme includes:

Examination of the cervix in mirrors. Visual gynecological examination at an early stage allows you to detect or suspect breast cancer by external signs: ulceration, discoloration of the cervix. In the invasive stage, with an exophytic type of cancer growth, fibrinous overlays, tumor-like growths of reddish, whitish, pinkish-gray color are detected on the surface of the cervix, which bleed easily when touched. In the case of endophytic growth of cervical cancer, the cervix becomes enlarged, acquires a barrel shape, an uneven bumpy surface, and an uneven pink-marble color. During recto-vaginal examination, infiltrates can be detected in the parametria and pelvis.

Colposcopy. With the help of colposcopy, with an image magnification of 7.5- 40 times, it is possible to study the cervix in more detail, detect background processes (dysplasia, leukoplakia) and the initial manifestations of cervical cancer. To study the epithelial transformation zone, a test with acetic acid and a Schiller test (iodine test) are used. Atypia in cervical cancer is revealed by the characteristic tortuosity of the vessels, less intense staining of pathological iodine-negative foci. If cervical cancer is suspected, a study of the tumor–associated antigen of squamous cell carcinomas - the cancer marker SCC (normally does not exceed 1.5 ng/ ml) is shown.

A biopsy of the cervix. Colposcopy makes it possible to identify the site of transformation and perform a targeted biopsy of the cervix for histological examination of the collected tissues. A knife biopsy of the cervix with curettage of the cervical canal is mandatory if cervical cancer is suspected. To determine the degree of cancer invasion, cervical conization is performed – a cone-shaped excision of a piece of tissue. The decisive and final method in the diagnosis of cervical cancer is the morphological interpretation of the biopsy results.

Additionally, for cervical cancer, a pelvic ultrasound is performed, which allows to stage the tumor process and plan the volume of intervention. To exclude tumor germination into adjacent organs and distant metastasis, ultrasound of the bladder and kidneys, cystoscopy, intravenous urography, ultrasound of the abdominal cavity, lung radiography, irrigoscopy, rectoscopy are resorted to. If necessary, patients with diagnosed cervical cancer should be consulted by a urologist, pulmonologist, proctologist.

All operations for cervical cancer are divided into organ-preserving and radical. The choice of tactics depends on the age of the woman, reproductive plans, and the prevalence of the cancer process. In oncogynecology, it is used:

Organ-preserving tactics. In preinvasive cancer in young women planning childbirth, gentle interventions are performed with the removal of initially altered areas of the cervix within healthy tissues. Such operations include cone-shaped amputation (conization) of the cervix, electrosurgical loop excision, and high cervical amputation. Economical resections for cervical cancer make it possible to observe oncological radicality and preserve reproductive function.

A radical tactic. With more pronounced changes and the prevalence of the tumor process, removal of the uterus with ovarian transposition (removing them outside the pelvis) or with ovariectomy is indicated. In cervical cancer in stage I B1, the standard surgical procedure is a pangisterectomy – extirpation of the uterus with adnexectomy and pelvic lymph node dissection. When the tumor passes to the vagina, radical hysterectomy is indicated with the removal of part of the vagina, ovaries, fallopian tubes, altered lymph nodes, and paracervical tissue.

The surgical stage of cervical cancer treatment can be combined with radiation or chemotherapy, or a combination of both. Chemotherapy and radiotherapy can be performed at the preoperative stage to reduce the size of the tumor (neoadjuvant therapy) or after surgery to destroy possibly remaining tumor tissues (adjuvant therapy). In advanced forms of cervical cancer, palliative operations are performed – removal of cystostomy, colostomy, formation of bypass intestinal anastomoses.

Treatment of cervical cancer, initiated at stage I, provides 5-year survival in 80-90% of patients; at stage II, survival after five years is 60-75%; at stage III - 30-40%; at stage IV – less than 10%. When performing organ-sparing operations for cervical cancer, the chances of childbirth remain. In the case of radical interventions, neoadjuvant or adjuvant therapy, fertility is completely lost.

When detecting cervical cancer during pregnancy, the tactics depend on the timing of gestation and the prevalence of the tumor process. If the gestation period corresponds to the II-III trimester, pregnancy can be maintained. Pregnancy management for cervical cancer is carried out under increased medical supervision. The method of delivery in this case is usually a cesarean section with simultaneous removal of the uterus. If the gestation period is less than 3 months, an artificial termination of pregnancy is performed with the immediate start of treatment for cervical cancer.

The main preventive measure for cancer is mass cancer screening using cytological examination of scrapings from the cervix and from the cervical canal. It is recommended to start the examination after the onset of sexual activity, but no later than the age of 21. During the first two years, the smear is given annually; then, with negative results, 1 time every 2-3 years.

Prevention of cervical cancer requires early detection and treatment of background diseases and sexual infections, limiting the number of sexual partners, and the use of barrier contraception in casual sexual intercourse. At-risk patients need to undergo a gynecologist's examination at least once every six months with an extended colposcopy and a cytological smear. Preventive vaccination against HPV and cervical cancer with Cervarix or Gardasil is indicated for girls and young women aged 9 to 26 years.

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