

MALIGNANT TUMORS OF THE OVARIES

Nurilloeva Shohsanam Shahrilloeva

Faculty of Medicine, Asia International University, Uzbekistan

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Abstract: Ovarian cancer is one of the types of malignant tumors, which in most cases is detected at a late stage. The initial stages of oncogenesis are often asymptomatic. Thus, ovarian malignancies in 75% of cases are diagnosed at stage 3-4, when it is not always possible to achieve the desired therapeutic result. Therefore, preventive examinations are extremely important, which are especially relevant for women at increased cancer risk. Predisposing factors may be:

- burdened heredity due to tumors of the reproductive system;
- obesity;
- Type 2 diabetes mellitus;
- endometriosis in the reproductive period.

Ovarian cancer can develop at any age, both in young girls and in patients over 80 years of age. However, the most vulnerable category are women aged 40-60 years.

Early detection of ovarian cancer allows you to expect a complete cure. In most cases, only radical surgical intervention is sufficient at the first stage.

Ovarian cancer is a primary, secondary, or metastatic tumor lesion of the female hormone-producing sex glands, the ovaries. In the early stages, ovarian cancer is asymptomatic; there are no pathognomonic manifestations. Common forms are manifested by weakness, malaise, decreased and perversion of appetite, impaired gastrointestinal function, dysuric disorders, ascites. Diagnosis of ovarian cancer includes physical and vaginal examinations, ultrasound, NMRI or CT scan of the pelvis, laparoscopy, and examination of the CA 125 cancer marker. Surgical approach (panhysterectomy), polychemotherapy, and radiotherapy are used in the treatment of ovarian cancer.

Ovarian cancer ranks seventh in the structure of general oncopathology (4-6%) and ranks third (after cancer of the uterine body and cervical cancer) among malignant tumors in oncogynecology. Ovarian cancer most often affects women in the pre-menopausal and menopausal periods, although it is no exception among women under 40 years of age.

Kinds

The clinical stages of ovarian cancer are as follows:

- The first stage – the tumor is located within the ovaries, there is no lesion of the lymph nodes and there are no metastases. Prognostically, damage to the 1st ovary is more favorable, but at the first stage, 2 ovaries may be simultaneously involved in the pathological process.
- The second stage – the tumor affects not only the gonads, but also spreads within the pelvis. The involvement of the uterus, fallopian tube, or other pelvic tissues in the pathological process can be determined.
- The third stage – in addition to the tumor, the oncological process spreads to the lymph nodes. Intraperitoneal, occlusive, iliac, lumbar and sacral lymphoid formations may be affected.

- The fourth stage is a condition where metastases are detected. They can manifest as lesions of the pleura, parenchymal organs (liver, etc.), as well as involvement of distant lymph nodes located outside the abdominal cavity.

- The problem of ovarian cancer development is considered from the standpoint of three hypotheses. It is believed that, like other ovarian tumors, ovarian cancer develops in conditions of prolonged hyperestrogenism, which increases the likelihood of tumor transformation in the estrogen-sensitive gland tissue.

- Another view on the genesis of ovarian cancer is based on the concepts of constant ovulation with the early onset of menarche, late menopause, a small number of pregnancies, and shortened lactation. Continuous ovulation contributes to changes in the epithelium of the ovarian stroma, thereby creating conditions for aberrant DNA damage and activation of oncogen expression.

- The genetic hypothesis identifies women with familial forms of breast and ovarian cancer among the potential risk groups. According to observations, an increased risk of ovarian cancer is associated with infertility, ovarian dysfunction, endometrial hyperplasia, frequent oophoritis and adnexitis, uterine fibroids, benign tumors and ovarian cysts. The use of hormonal contraception for more than 5 years, on the contrary, reduces the likelihood of ovarian cancer by almost half.

- I (T1) – the prevalence of the tumor is limited to the ovaries:

- IA (T1a) – cancer of one ovary without germination of its capsule and proliferation of tumor cells on the surface of the gland

- IB (T1b) – cancer of both ovaries without germination of their capsules and proliferation of tumor cells on the surface of the glands

- IC (T1c) – cancer of one or two ovaries with germination and/or rupture of the capsule, tumor growths on the surface of the gland, the presence of atypical cells in ascitic or flushing waters

- II (T2) – lesion of one or both ovaries with the spread of the tumor to the structures of the pelvis:

- IIA (T2a) - ovarian cancer spreads or metastasizes to the fallopian tubes or uterus

- IIB (T2b) - ovarian cancer spreads to other structures of the pelvis

- IIC (T2c) – the tumor process is limited to the lesion of the small pelvis, the presence of atypical cells in ascitic or flushing waters is determined

- III (T3/N1) - lesion of one or both ovaries with metastasis of ovarian cancer along the peritoneum or into regional lymph nodes:

- IIIA (T3a) – the presence of microscopically confirmed intraperitoneal metastases

- IIIB (T3b) – macroscopically detectable intraperitoneal metastases up to 2 cm in diameter

- IIIC (T3c/N1) - macroscopically detectable intraperitoneal metastases with a diameter of more than 2 cm or metastases to regional lymph nodes

- IV (M1) – metastasis of ovarian cancer to distant organs.

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Symptoms of ovarian cancer

The first signs of ovarian cancer are not very specific. The following symptoms may occur:

- decreased appetite;
- fast food saturation;
- heartburn, belching;

- bloating;
- general weakness;
- slight rise in body temperature;
- menstrual cycle disorders;
- frequent and uncomfortable urination;
- pains of varying intensity, which in most cases do not have a clear localization;
- acceleration of the erythrocyte sedimentation reaction (according to general clinical blood analysis).

Later, other symptoms and signs of ovarian cancer are added:

- weight loss;
- increased abdominal volume;
- shortness of breath;
- palpation determines the tumor, which in the later stages can be felt through the anterior wall of the abdomen as a lumpy dense formation.

The appearance of ascites, an accumulation of fluid in the abdominal cavity, is a common companion of a malignant ovarian tumor. This symptom indicates the neglect of the oncological process. If another cause of ascites is suspected in the patient (liver, heart, kidney, etc.), then screening ultrasound scanning of the pelvic organs is recommended to exclude possible ovarian cancer.

Thus, the symptoms of ovarian cancer in women are not very specific. Therefore, for any change in well-being that cannot be explained by "standard" reasons, a gynecologist's consultation and ultrasound screening are recommended to exclude volumetric processes in the pelvic area.

The manifestations of ovarian cancer are variable, which is explained by the variety of morphological forms of the disease. In localized forms of ovarian cancer, symptoms are usually absent. In young women, ovarian cancer can manifest clinically with a sudden pain syndrome caused by twisting of the tumor stem or perforation of its capsule.

Activation of the manifestations of ovarian cancer develops as the tumor process spreads. There is an increase in malaise, weakness, fatigue, subfebrility; deterioration of appetite, gastrointestinal function (flatulence, nausea, constipation); the appearance of dysuric phenomena.

When the peritoneum is affected, ascites develops; in the case of lung metastases, tumor pleurisy develops. In the later stages, cardiovascular and respiratory insufficiency increases, edema of the lower extremities and thrombosis develop. Metastases in ovarian cancer are usually found in the liver, lungs, and bones.

Hormone-active epithelial formations are found among malignant ovarian tumors. Granulosa cell carcinoma of the ovaries is a feminizing tumor that promotes premature puberty in girls and the resumption of uterine bleeding in menopausal patients. A masculinizing tumor, adrenoblastoma, on the contrary, leads to hirsutism, figure changes, breast reduction, and menstruation cessation.

Reasons

The causes of ovarian cancer are not reliably known. The role of genetic factors associated with the presence of BRCA-1 and BRCA-2 mutations is expressed. However, not all women carry these genes. Perhaps the condition of chronic sluggish inflammation, characteristic of obesity, also plays a role. Currently, scientific work is continuing to clarify the etiopathogenesis of ovarian carcinogenesis. They can bring scientists closer to developing effective disease prevention methods.

Diagnostics

The complex of methods for diagnosing ovarian cancer includes physical, gynecological, and instrumental examinations. Recognition of ascites and tumors can be performed already during palpation of the abdomen.

- Gynecological examination, although it allows to identify the presence of a single or bilateral ovarian formation, does not give a clear idea of the degree of its goodness. Rectovaginal examination is used to determine the invasion of ovarian cancer into the parametrium and pararectal tissue.

- Visualization methods. Using transvaginal echography (ultrasound), MRI and CT of the small pelvis, a bulky formation of irregular shape without a clear capsule with bumpy contours and uneven internal structure is revealed; its size and degree of prevalence are estimated.

- Diagnostic laparoscopy for ovarian cancer is necessary to perform a biopsy and determine the histotype of the tumor, collect peritoneal effusion or flushes for cytological examination. In some cases, ascitic fluid can be obtained by puncturing the posterior vaginal arch.

If ovarian cancer is suspected, a study of tumor-associated markers in serum (CA-19.9, CA-125, etc.) is indicated. To exclude the primary focus or metastases of ovarian cancer in distant organs, mammography, X-ray of the stomach and lungs, irrigoscopy; ultrasound of the abdominal cavity, ultrasound of the pleural cavity, ultrasound of the thyroid gland; FGDS, rectoromanoscopy, cystoscopy, chromocystoscopy.

CT scan of the OBP/pelvis. Cystadenocarcinoma of the left ovary.

Ovarian Cancer Treatment

The question of choosing therapeutic tactics for ovarian cancer is solved taking into account the stage of the process, the morphological structure of the tumor, the potential sensitivity of this histotype to chemotherapeutic and radiation effects, aggravating somatic and age-related factors. The treatment of ovarian cancer combines a surgical approach (panhysterectomy) with polychemotherapy and radiotherapy.

Surgical treatment

Surgical treatment of localized ovarian cancer (grades I-II) consists in removing the uterus with adnexectomy and resection of the large omentum. In debilitated or elderly patients, supravaginal amputation of the uterus with appendages and subtotal resection of the large omentum may be performed. During the operation, an intraoperative revision of the paraaortic lymph nodes with their urgent intraoperative histological examination is required. In stage III-IV ovarian cancer, cytoreductive intervention is performed, aimed at maximizing the removal of tumor masses before chemotherapy. In inoperable processes, they are limited to a biopsy of the tumor tissue.

Antitumor therapy

Polychemotherapy for ovarian cancer can be performed at the preoperative, postoperative stage or be an independent treatment for a widespread malignant process. Polychemotherapy (with platinum preparations, chloroethylamines, taxanes) makes it possible to suppress mitosis and proliferation of tumor cells. Side effects of cytostatics include nausea, vomiting, neuro- and nephrotoxicity, and suppression of hematopoietic function. Radiation therapy for ovarian cancer has little effectiveness.

Prognosis and prevention

Long-term survival in ovarian cancer is determined by the stage of the disease, the morphological structure of the tumor and its differentiation. Depending on the histotype of the tumor, 60-90% of patients with stage I ovarian cancer overcome the five-year survival threshold, 40-50% - from stage II, 11% - from stage III, 5% - from stage IV. Serous and mucinous ovarian

cancers are more favorable in terms of prognosis; mesonephroid, undifferentiated, etc. are less favorable.

In the postoperative period after radical hysterectomy (pangysterectomy), patients require systematic monitoring by an oncogynecologist to prevent the development of post-castration syndrome. In the prevention of ovarian cancer, a significant role is assigned to the timely detection of benign tumors of the glands, oncoprophylactic examinations, and reducing the effects of adverse factors.

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