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"OVARIAN DISEASES IN WOMEN AND OVARIAN CANCER"

Muminova Aziza Takhirovna
student 3-year students at the Faculty of
Medicine of the Asian International
University of Bukhara

Annotation. Macroscopically, ovarian tumors are presented in the form of cystic formations filled with fluid, or in the form of a dense node, reaching various sizes. It is currently believed that all ovarian neoplasms develop from a single tissue component.
Key words: oophoritis, coelom, endocervical, mucinous and endometrioid tumors, cystoma, endometrioid, cystadenocarcinoma, teratoblastoma, granulosatheca cell tumor, nuclear atypia, thecoma, fibroma.

Among ovarian diseases, the most common are benign cysts and tumors. As for inflammatory processes (oophoritis), they are rare and, as a rule, together with salpingitis. Among tumors developing in women, ovarian neoplasms occupy a leading place, with the exception of mammary gland neoplasms. Ovarian tumors are more common in women of childbearing age 20–45 years. Unfortunately, in most patients, malignant ovarian tumors are very difficult to recognize in the early stages: some patients note nagging pain in the lower abdomen, which is accompanied by effusion into the abdominal cavity or large tumor sizes; some of the tumors have hormonal activity. Macroscopically, ovarian tumors are presented in the form of cystic formations filled with fluid, or in the form of a dense node, reaching various sizes.

It is currently believed that all ovarian neoplasms develop from a single tissue component. This can be: 1) the surface epithelium of the coelom, which gives rise to the fallopian tubes, as well as endocervical glands, in embryogenesis; 2) germ cells migrating to the ovaries from the yolk sac, possessing pluripotent properties in the directions of differentiation; 3) ovarian stroma cells, which are the precursors of the endocrine apparatus in the organ. The first group of neoplasms includes serous, mucinous and endometrioid tumors. These tumors are cystic neoplasms (cystomas) filled with fluid. A distinctive feature is the internal lining of these tumors, for example: the internal lining of serous tumors is represented by a high cylindrical epithelium with developed cilia, mucinous tumors - a cylindrical epithelium without cilia, the apical parts of the cytoplasm contain mucus; endometrioid tumors are represented by tubular glands that resemble endometrial glands.

Malignant variants of tumors of this group (cystadenocarcinoma) are characterized by invasive growth, the appearance of foci of nuclear atypia and stratification of the epithelium. Foci of necrosis are often found in tumors. Germ cell tumors of the ovaries arise from germ

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and germ cells and are represented by teratomas and teratoblastomas. Teratoma macroscopically has the appearance of a single-chamber cyst containing hair and cheese-like sebaceous material. Histologically, the tumor cavity is lined with flat epithelium, under which there are sebaceous glands, hair follicles and other skin appendages. Sex cord stroma tumors originate from the ovarian stroma, developing from the embryonic sex cords.

Undifferentiated gonadal mesenchyme produces specific structures in both male and female gonads, while in the ovaries there are tumors that produce both male and female hormones. Therefore, tumors have a feminizing or masculinizing effect on a woman's body, which is their distinctive feature. Common representatives are granulosatheca cell tumors, thecomas and fibromas. Thecomas and fibromas develop from the ovarian stroma and are composed of either fibroblasts (fibromas) or more succulent spindle cells with lipid inclusions (thecomas) 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, malignant ovarian tumors in 75% of cases are diagnosed at stages 3-4, when it is not always possible to achieve the proper therapeutic result. Therefore, preventive examinations are of utmost importance, which are especially relevant for women who belong to the category of increased cancer risk. Predisposing factors may be:

• family history of tumors of the reproductive system;
• obesity;
• diabetes mellitus type 2;
• endometriosis in the reproductive period.

Ovarian cancer can develop at any age - from little girls to 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, at the first stage, only radical surgery is sufficient.

Kinds

The clinical stages of ovarian cancer are as follows:

• Stage one – the tumor is located within the ovaries, there is no involvement of the lymph nodes and there are no metastases. The prognosis is more favorable for damage to 1 ovary, but at the first stage, 2 ovaries can be simultaneously involved in the pathological process.

• Second stage – the tumor affects not only the gonads, but also spreads within the pelvis. Involvement of the uterus, fallopian tube or other pelvic tissues in the pathological process may be determined.

• Third stage – in addition to the tumor, the oncological process spreads to the lymph nodes. Intraperitoneal, obturator, iliac, lumbar and sacral lymphoid formations may be affected.

• The fourth stage is the state when metastases are detected. They can manifest as damage to the pleura, parenchymal organs (liver, etc.), as well as involvement of distant lymph nodes located outside the abdominal cavity.

Symptoms of ovarian cancer

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

• loss of appetite;
• quick saturation with food;

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• heartburn, belching;
• bloating;
• general weakness;
• slight rise in body temperature;
• menstrual irregularities;
• frequent and uncomfortable urination;
• pain of varying intensity, which in most cases does not have a clear localization;
• acceleration of the erythrocyte sedimentation reaction (according to a general clinical blood test).

Later, other symptoms and signs of ovarian cancer appear:
• weight loss;
• increase in abdominal volume;
• shortness of breath;
• a tumor is determined by palpation, which in later stages can be palpated 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 to a malignant ovarian tumor. This symptom indicates that the cancer process is advanced. If the patient is suspected of another cause of ascites (diseases of the liver, heart, kidneys, etc.), then a screening ultrasound scan of the pelvic organs is recommended to exclude possible ovarian cancer.

Thus, the symptoms of ovarian cancer in women are not specific. Therefore, for any change in well-being that cannot be explained by "standard" reasons, it is recommended to consult a gynecologist and conduct a screening ultrasound to exclude mass processes in the pelvic area.

Causes

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 has been suggested. However, not all women are carriers of these genes. The state of chronic low-grade inflammation characteristic of obesity may also play a role. Currently, scientific work is ongoing aimed at elucidating the etiopathogenesis of ovarian carcinogenesis. They can bring scientists closer to developing effective methods for preventing the disease.

Diagnosis of ovarian cancer

Early diagnosis of ovarian cancer involves not only the assessment of clinical symptoms and medical history, but also the use of radiological diagnostic methods. An ultrasound scan is recommended as a screening test. The method allows you to evaluate the size of the ovaries and their structure. According to modern recommendations in the field of echography, a report on the condition of the female gonads should be classified according to the O-RADS system. It allows you to indirectly assess the nature of the identified pathological process (the likelihood of the process being benign or malignant) and based on this, determine a further program for managing the patient. If the presence of a malignant neoplasm is suspected based on ultrasound data, it is recommended to perform more detailed examinations - CT scan with contrast or magnetic resonance imaging. The advantage of MRI is that the method allows you to evaluate the structure of an organ in 3-dimensional space and determine the degree of tumor invasion into adjacent tissues. This is important at the surgical planning stage. The diagnostic complex of MRI and ultrasound increases the accuracy of preoperative diagnosis to 97.5%.

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The examination program for patients with suspected ovarian cancer also includes chest X-ray, X-ray scanning of the digestive tract and urinary system. These methods make it possible to assess the extent of the process.

According to modern recommendations, preoperative diagnosis of ovarian cancer is three-stage:

1. The first stage is a clinical assessment of complaints and a vaginal examination.

2. The second stage is radiation diagnostic methods, among which ultrasound scanning is primary. If, according to ultrasound, a pathological process with a high probability of malignancy is detected, then computed tomography or magnetic resonance imaging is recommended.

3. The third stage is immunological diagnostic methods with determination of the concentration of tumor markers in the blood. In ovarian cancer, as a rule, there is an increase in the levels of CA-125, HE-4 and CA 19-9. Using the software, you can determine the ROMA index, which, based on the level of CA-125, HE-4 and reproductive status, allows you to calculate the probabilistic risk of ovarian cancer in a particular patient.

If, based on the examination, the diagnosis of ovarian cancer is most likely, then a biopsy of the pelvic mass is performed. Based on histological and/or immunohistochemical examination, the final preoperative diagnosis is established. If, for objective reasons, a biopsy is impossible, then chemotherapy treatment begins, after which the issue of surgical intervention is decided.

Ovarian cancer treatment

The optimal treatment option for ovarian cancer is to perform surgery at the first stage. Then the issue of chemotherapy is decided. Radiation treatment for malignant epithelial tumors is not very effective (it can be recommended as part of complex treatment of recurrent tumors of a certain histotype).

Conservative treatment

For low-grade tumors (non-clear cell cancers), which are detected at the first stage, chemotherapy is not indicated after radical surgery. In other cases, chemotherapy courses using platinum drugs are carried out.

Surgery

The basis of treatment for ovarian cancer is cytoreductive surgery. It involves complete removal of the uterus (body and cervix), fallopian tubes, ovaries and adjacent omentum. If the results of the preoperative examination reveal damage to the lymph nodes, then lymph node dissection is performed.

In young women who have not yet given birth, in the presence of a low-grade tumor process that has not spread beyond the organ, it is possible to perform a unilateral adnexectomy and removal of the omentum. This decision is made by a council of doctors in agreement with the patient.

Prevention

Prevention of ovarian cancer is aimed at regular monitoring by a gynecologist. It has been reported that cancer can develop at the site of endometriotic heterotopias. Therefore, women who suffered from endometriosis during the reproductive period (a disease in which cells of the uterine mucosa are found outside the uterine cavity, including in the ovaries) are at particular risk.

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Considering the potential cancer risk in patients of any age, especially postmenopausal women, women should be regularly monitored by a gynecologist. For early detection of ovarian tumors, a bimanual vaginal examination and ultrasound scanning of the pelvic organs are performed.

Rehabilitation

After completing the full course of treatment for ovarian cancer, all women are followed up with a gynecological oncologist. The specialist recommends screening ultrasound, analysis of the CA-125 tumor marker in the blood and other studies at a certain frequency, which help to timely detect a possible relapse of the oncological process and take the necessary therapeutic measures.

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