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Higher state educational establishment of Ukraine
“Ukrainian medical stomatological academy”**



«Approved

At the sitting of the chair of oncology
The minutes №2 from September 2, 2018
y Manager of chair of oncology
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**METHODICAL POINTING
FOR INDEPENDENT WORK OF STUDENTS
DURING PREPARATION TO PRACTICAL EMPLOYMENT**

<i>Educational discipline</i>	<i>Oncology</i>
<i>Module №</i>	<i>I</i>
<i>Semantic module №</i>	<i>3</i>
<i>Theme of employment</i>	Ovarian cancer
<i>Course</i>	<i>V</i>
<i>Faculty</i>	<i>Medical №1</i>

Poltava - 2018

THEME: OVARIAN CANCER

1. Actuality of theme.

Ovarian cancer is the most malignant tumor of gynecologic malignancy. In recent year there is a height of morbidity on this pathology.

Among the malignant tumors of organs of the reproductive system - malignant tumors of ovaries are on a fourth place after the chance of breast cancer, chance of neck and body of uterus and present 15 - 20 % all tumors of genitalia. The tumors of ovaries can develop for the women of any age, even for girls, but mostly arise up in age 40 - 50. In connection with the asymptomatic flowing of process a tumor is diagnosed in 65 - 70 % patients in III - IV of the stage. Therefore a large value is acquired by measures on a prophylaxis and early exposure of chance of ovaries.

Diagnostic errors happen often enough. Part of patients is operated with a diagnosis: "umbilical hernia", "appendicitis" and other. During an operation ovarian cancer is diagnosed. Internists unjustified long treat patients with the diagnosis "hepatocholecystitis", "enterocolitis", "cirrhosis of liver", "exsudate pleurisy". After consultation of oncologist a diagnosis is set: "ovarian cancer". Thus time is missed out and a tumor appears in III - IV of the stage. All of it testifies to obligatory knowledge of this pathology the doctors of all professions.

2. Concrete educational aims:

To know:

- etiology and pathogeny of ovarian cancer;
- epidemiology and modern indexes of morbidity on ovarian cancer;
- histological classification of ovarian cancer;
- clinical classification of ovarian cancer;
- clinic and obligatory methods of inspection of patients on ovarian cancer;
- basic methods of treatment of patients are on ovarian cancer;
- basic groups of antitumoral preparations (cytostatics), that is used for treatment of patients on ovarian cancer;
- risk groups.

Able:

- to define the stage of distribution of tumor process;
- to conduct the common objective and special gynaecological inspection of patients;
- to define a value and necessity of additional methods of inspection of patients on ovarian cancer (puncture abdominal cavity of back vault, paracentesis, collection of material for cytological research, roentgenologic, endoscopic, ultrasonic research, radioisotopic inspection and other);
- to conduct differential diagnostics of cyst, customs and ovarian cancer at a gynaecological inspection;
- to appoint individual treatment of patients on ovarian cancer depending on the stage of tumor process, general of patients and age;
- to appoint prophylactic measures on a fight against these tumors.

3. Base knowledge, abilities, skills, are necessary for a study themes (interdisciplinary integration).

Disciplines	To know	Able
Anatomy	Anatomy of ovary, blood supply and way of outflow of lymph.	<p>To get it right etiology of disease, nosotropic explanation of clinical displays and prophylactic measures.</p> <p>To define the prognosis of disease depending on a histology structure tumor.</p> <p>Palpation, percussion, review in mirrors, bimanual research. Pre-tumor diseases.</p> <p>To appoint the course of polychemotherapy.</p>
Histology	Histological structure of ovary, variety of high quality and malignant tumors, that predefined by the plural sources of their origin.	
Surgery	Principles of surgical interference, volume of interferences.	
Pathoanatomy	Histological structure of ovary, variety of high quality and malignant tumors, that predefined by the plural sources of their origin.	
General physiology	Function endocrine, immune, nervous systems, function of liver, kidneys.	
Physiopathology	Function endocrine, immune, nervous systems, function of liver, kidneys.	
Therapy	Methods of general inspection of patients.	
Gynaecology	Methods of gynaecological inspection of women.	
Pharmacology	Knowledge from the groups of antitumoral preparations and by the mechanism of their operating on a tumor and organism.	

4. Task for independent work during preparation to employment.

4.1. List of basic terms, parameters, descriptions that a student must know.

Terminology

English	Russian	Latin
Ovarian cancer	Рак яичников	Cancer of ovarii
Cystoma of ovary	Кистома яичников	Cistoma of ovarii
Abdominal region	Брюшная полость	Abdomen of cavity
Adenocarcinoma	Аденокарцинома	Adenocarcinoma
Metastatic cancer stomach	Метастатический рак желудка	Cancer of ventriculi metastaticum
Bilateral formations of ovaries	Двусторонние опухоли яичников	Tumor of ovarii bilateralis
Ultrasonic research	Ультразвуковое исследование	Ultra of sound
Suspicion is on the tumor of ovary	Подозрение на опухоль яичника	Suspicio of ca ovarii

Back vault of vagina	Задний свод влагалища	Fornex of posterior
Laparascopy	Лапароскопия	Laparoscopia
Chemotherapy	Химиотерапия	Chemotherapy
Extirpation of uterus with appendages, moving away of omentum	Экстирпация или ампутация матки с придатками, резекция сальника	Extirpatio of uteri totalis cum adnexis bilateralis

4.2. Theoretical questions are to employment.

1. Anatomy of ovaries.
2. Blood supply, lymph flow.
3. Histological structures of tumors of ovaries.
4. A volume of inspections sick is on ovarian cancer.
5. Where ovarian cancer metastatic mostly.
6. Basic methods of treatment of ovarian cancer.
7. Polychemotherapy of patients is on ovarian cancer.
8. Prognosis.
9. Rehabilitation.
10. Prophylaxis.

4.3. List of educational practical tasks that must be mastered on practical employment :

1. Review of neck of uterus, vagina, external genital organs (it is cities where metastases can be).
2. Bimanual is a vaginal inspection.
3. Rectal inspection.
4. Punctural of back vault is collection of material for cytological research.
5. Factious scraping off of uterus (cavities of uterus and separately cervical channel).
6. Biopsy of tumor knot of vagina or lymphatic knots to the back value.
7. Ultra sound of uterus and her appendages.

Table of contents of theme.

A. pathoanatomy.

There is not such histological variety of high quality and malignant tumors in any organ of man, as in ovaries. Such state is predefined by the plural sources of their origin. M.F.Glasunov distinguished 18 sources the tumors of ovaries can arise out of that.

1973 the year Worldwide organization of health protection offered to histological classification of tumors of ovaries:

I. Ephithelial

1. Serosal:
 - a) on a limit (potentially malignant);
 - b) malignant.
2. Mucinosiis:
 - a) on a limit (potentially malignant);
 - b) malignant.
3. Endometrial:

- a) on a limit (potentially malignant);
 - b) malignant.
- 4. Mesonephroid:
 - a) on a limit (potentially malignant);
 - b) malignant.
- 5. Brenner's tumor:
 - a) on a limit (potentially malignant);
 - b) malignant.
- 6. Epithelial enclavomas:
 - a) on a limit (potentially malignant);
 - b) malignant.
- 7. Undifferentiated carcinomas.
- 8. Unclassified epithelial tumors.

II. Tumors of stroma ovary

- 1. Granulo cellular stroma tumor.
- 2. Androblastomas.
- 3. Gonadoblastomal.
- 4. Unclassified tumors of stroma ovary.

On a form a height malignant tumors of ovaries are: exophytic and endophytic (inverting). There are the also mixed forms of tumor.

Epidemiology.

The malignant tumors of ovaries fold to 20% of all malignant new formations of womans. On the average annually registry round 15 new cases of ovarian cancer on a 100 000 thousand woman population.

Morbidity and death rate from the chaste of ovaries are observed in many countries of Europe, USA, Japan, England, Spain. In the Poltava area in the last few years morbidity of ovarian cancer folds 15,8 (on Ukraine 15,0) on a 100 000 population. Started stages of ovarian cancer III - IV of century of 56,7% (Ukraine of 38,9%).

Etiology.

1. Hormonal theory. Lately the cancer of ovaries is attributed to the hormonal tumors. It becomes clear, if to take into account, that ovaries are the basic organ of secretion of sexual hormones, and their activity is regulated by the hypothalamus-hypophysial system.

Epidemiology researches at an opportunity to educe the row of violations of menstrual and reproductive functions for patients was given ovarian cancer: early menarche, early or late menopause, decline of genital function. Mostly ovarian cancer arises up directly to or after menopause. Proof of hormonal chaste are frequent hyperplastic processes endometrium for patients by this form of chaste. The role of endocrine-exchange violations in pathogeny of this disease is confirmed by frequent development of initially-plural tumors with localization in endometrium and mammary glands. It is necessary to consider that the parafunction of ovaries influences on development of chaste of ovary, more precisely ovulations.

2. Used for setting fire theory. The tumors of ovaries quite often arise up for patients that were ill inflammations of appendages of uterus long time treated adnextumors of the used for setting fire genesis.

3. Traumatic theory. In an origin ovarian cancer matter, that carried patients in the past operation, concerning a fibromyoms uterus, cystom of ovaries, during that those were executed, or other interferences on ovaries.

The last time is studied question of value of succession in the origin of malignant tumors of ovaries. It is set that children and grandchildren of patients that carried ovarian cancer more than in the general population of people have possibilities of origin of such tumors.

Classification ovarian cancer
(code of MKX - Oh C56) by system of TNM (6 is e edition, 2002) and FIGO
TNM Clinical classification
T is the Primary tumor

Category of TNM	Stages FIGO	Description of signs
T _x		Not sufficiently data for the estimation of primary tumor.
T ₀		A primary tumor is not determined.
T ₁	I	The height of tumor is limited to only the ovaries.
T _{1a}	IA	A tumor will strike one ovary, capsule intact, absent signs of tumor on the external surface of ovary, in a ascites liquid or washings off from a peritoneum malignant cages are absent.
T _{1b}	IB	A tumor will strike both ovaries, capsule intact, absent signs of tumor on the external surface of ovary, in a ascites liquid or washings off from a peritoneum malignant cages are absent.
T _{1c}	IC	A tumor is limited to one or two ovaries with any of such descriptions : dug up capsules, signs of tumor on the surface of one or both ovaries, presence of malignant cages in a ascites liquid or washings off from a peritoneum.
T ₂	II	A tumor takes one or both ovaries with distribution on the walls of pelvis.
T _{2a}	IIA	Distribution and/or innidiation in an uterus and/or one or both pipes, in a ascites liquid or washings off from a peritoneum malignant cages are absent.
T _{2b}	IIB	Distribution on other organs of pelvis, in a ascites liquid or washings off from a peritoneum malignant cages are absent.
T _{2c}	IIC	Distribution on a pelvis (2a or 2b), but with the presence of malignant cages in a ascites liquid or washings off from a peritoneum.
T ₃ and/or N ₁	III	A tumor takes one or both ovaries with the microscopically confirmed metastases out of pelvis and/or defeats of regional lymphatic lymphonoduss.
T _{3a}	IIIA	Microscopic peritoneal metastases are out of limits of pelvis.
T _{3b}	IIIB	Macroscopic peritoneal metastases out of limits of pelvis, none of them exceeds a 2 cm in the most measuring.
T _{3c} N ₁	IIIC	Peritoneal metastases out of limits of pelvis, by sizes an over 2 cm in the most measuring and/or metastases in regional lymphonoduss.
M ₁	IV	Remote metastases (after the exception of peritoneal metastases).

Note:

Metastases in the capsule of liver belong to T3 (stages of III), parenchyma hepatic metastases - to M1 (stages of IV). If there is pleura exudate, then necessity of cytological confirmation for put of case to M1 (stage of IV).

N is the Regional lymphatic nodus

NX - not sufficiently data for the estimation of the state of regional lymphatic knots

N0 - there are not signs of defeat of regional lymphatic nodus

N1 is the present metastases in regional lymphatic nodus

M is the Remote metastases

MX - not sufficiently data for determination of remote metastases

M0 - the remote metastases are not determined

M1 - there are remote metastases

pTNM Pathomorphology classification

Categories of pT, pN, pM answer the categories of T, N and M.

pN0 - Material for histological research after pelvic lymphadenectomy must include not.

G is Histology gradation

Gx - Degree of differentiation can not be certain

Gb is Frontier malignantness

G1 is the High degree of differentiation

G2 is the Middle degree of differentiation

G3 - 4 is the Subzero degree of differentiation or undifferentiated tumor

Grouping is after the stages

Stage of IA	T _{1a}	N ₀	M ₀
Stage of IB	T _{1b}	N ₀	M ₀
Stage of IC	T _{1c}	N ₀	M ₀
Stage of IIA	T _{2a}	N ₀	M ₀
Stage of IIB	T _{2b}	N ₀	M ₀
Stage of IIC	T _{2c}	N ₀	M ₀
Stage of IIIA	T _{3a}	N ₀	M ₀
Stage of IIIB	T _{3b}	N ₀	M ₀
Stage of IIIC	T _{3c}	N ₀	M ₀
	any T	N ₁	M ₀
Stage of IV	any T	any N	M ₁

Clinic.

Ovarian cancer is characterized by absence of specific complaints. Hormonal tumors can appear disorders of menstruation. Sometimes abdominal stomach increases for a patient. On the initial stages a not clear feeling of weight appear below abdominal or on periodic stomach-aches that take an epigastrium and subcostal. Patients have feeling of discomfort from the side of gastrointestinal tract, nausea, loss of appetite, swelling, locks or diarrhea, frequent urges on urination and oliguria. These symptoms of chase of ovary sometimes give basis by mistake to suspect other disease of abdominal region (gastrius, colitis, cholecystitis, appendicitis or caught hernia) for a patient. At excrescence of tumor symptoms become more expressed, added general tiredness, abandonment from a meal, pain becomes more intensive, and even permanent, the symptoms of partial subzero or high bowel obstruction are added. At the expressed hydroperitoneum, in particular hydrotorax, the shortness of breath appears. Subfebrile condition and loss of body weight is added.

- There are not previous cystophorous changes at primary to the chase of ovaries. Usually such tumors of undifferential, small sizes, have the appearance of "small excrescences", "berries of mulberry", to diagnose them very difficult.
- Secondary ovarian cancer develops the way of malignant of internal layer of cystem. Tumors can be one and manyboxes, to arrive at considerable sizes, heterogeneous closeness.
- Metastatic ovarian cancer ovarian cancer - it mostly metastases in ovaries at the chase of stomach (cancer Krucenberg), to the chase of mammary gland and other

Diagnostics.

1. Gynaecological researches:
 - a) punctural of back vault or punctural of abdominal region;
 - b) collection of strokes is from the neck of uterus, cervical channel, cavity of uterus for cytological research;
 - c) smear cavity of uterus;
 - d) paracentesis.
2. Roentgenologic researches:
 - a) t-ray lungs (mainly sciagraphy);
 - b) t-ray of stomach and bowels;
 - c) irrigoscopy;
 - d) intravenous urography (on indexes).
3. Endoscopic researches (on occasion, where it maybe, it is desirable to replace roentgenologic researches endoscopic) :
 - a) endoscopy stomach;
 - b) endoscopy colon;
 - c) laparoscopy;
 - d) cystoscopy;
 - e) rectometer.
4. Other methods of diagnostics :
 - a) ultrasonic research of liver and organs of small pelvis;
 - b) thermography;
 - c) radioisotopic researches and other;

d) computer tomography.

Differential diagnosis.

1. Of high quality tumors of ovaries (cysts and cystom).
2. Chronic inflammation of ovaries.
3. Undifferentiated fibroma uterus.
4. Cancer of body of uterus is with metastases in ovaries.

Treatment.

Treatment of patients with tumors of ovaries it must be to complex and successive depending on the stage of distribution of tumor process.

Basic components of therapy :

1. Surgical interference.
2. Chemotherapy.
3. Endocrinotherapy.
4. Radical therapy.
5. Immunotherapy.
6. Restoration treatment.

I and II the stages of tumors of ovaries, and also at the tumorous form of tumors of treatment begin with operating interference. The volume of operation depends on character of tumor and degree of her distribution. A radical operation it is considered for this pathology: extirpation uterus or amputation of uterus with appendages and resection of omentum. In an abdominal region there is a polyethylene tube for introduction of chemotherapy. Advantage of extirpation uterus gives oneself up in recent year, but not to надпівовій amputation, taking into account possibility of polineoplasm.

Treatment of III and IV of the stage of tumors of ovaries is operation (extirpation or amputation of uterus with additions, omentum, moving away, on possibility, all other cells of tumor : in an abdominal region, after peritoneal space, lymphatic nodes) → 6 courses of chemotherapy of I of line. The presence of tumor changes tactics of treatment. For patients with inoperable tumors, by metastases in a liver, lungs, supraclavicular lymphonoduss, at the massive defeat of mediastinum, presence of hydroperitoneum is a chemotherapy 2-3 courses with the next decision of question in relation to an operation.

Risk groups are for the tumors of ovaries.

1. Patients, before operated concerning of high quality tumors or tumular processes of ovaries, a resection was conducted that or one moving away of ovaries.
2. Patients are before operated concerning a fibromioma uterus with the care of one or both ovaries.
3. Patients that treated oneself concerning the tumors of mammary gland.
4. Patients with chronic inflammation of appendages of uterus, especially at presence of so-called adnextumors.
5. Burdened domestic anamnesis.
6. Patients that long time were shadowed concerning oligosymptomatic fibromioms of uterus.

7. Women with violation of menstrual function on the draught of great while as meno- and metrorrhagia, amenorrhea, by primary and repeated sterility of hormonal etiology, with the early signs of climax.

Materials are for self-control.

A. Question for self-control.

1. Enumerate the etiologic factors of ovarian cancer.
2. What clinical symptoms patients have on ovarian cancer.
3. Clinical classification of ovarian cancer.
4. Name the additional methods of inspection of patients on ovarian cancer.
5. Role ultrasound is in early diagnostics of ovarian cancer.
6. That such the paracentesis?
7. Patients have volumes of surgical interference on ovarian cancer. Name a classic operation at this pathology and authors, that she was offered.
8. Combined treatment of patients.
9. Patients have a role of chemotherapy on ovarian cancer. Groups of antitumoral preparations. Efficiency of treatment and his complication.

Recommended literature:

a) Basic

1. Oncology / [Edited by prof. I.B.Shepotin, prof. R.T.Evans]. – Kiev: Medicine, 2008. – 496 p.
2. Clinical oncology / [V.Sorkin, A.Popovich, Yu. Dumanskiy and oth.]; under the edit. of the prof. G.V.Bondar. – Simferopol, 2008. – 192 p.

b) Additional

1. Ain KB: Anaplastic thyroid carcinoma: a therapeutic challenge. Semin Surg Oncol 1999; 16: 64-69.
2. Scully C, Field JK, Tanzawa H: Genetic aberrations in oral or head and neck squamous cell carcinoma (SCCHN): 1. Carcinogen metabolism, DNA repair and cell cycle control. Oral Oncol 2000 May; 36 (3): 256-63.