Surgical treatment of malignant gynecological tumors

Surgical treatment of malignant gynecological tumors is an effort to surgically remove the tumor itself, its metastases, micrometastases and biopsy material for staging examination. It varies according to the **type of tumor, the clinical stage of the tumor and according to the woman's wish to preserve the possibility of pregnancy** (fertility-preserving procedures).

Cervical carcinoma

The most important thing here is that the treatment is diametrically different at various **clinical stages**. Surgical treatment is **dominant in the early stages** and is curative in intent; in the later stages, non-surgical treatment prevails, surgical only in palliative indications. About 40% of women are under the age of 40 so we have to take into account a possibility of **fertility-preserving procedures**. In this case, the procedure is performed less radically and thus with a higher risk of disease relapse but leaves the woman with the possibility of pregnancy.

Stage IA

If the **tumor is smaller than 5 mm** (stage IA), the basic treatment is a **simple hysterectomy**. It is possible to extend it by bilateral adnexectomy but it is not necessary (at the age of over 45 it is more likely to be performed, at the age of 40 rather not). **Conization** is performed as a fertility-preserving performance.

Stage IB

If the tumor is larger than 5 mm but still located **only in the cervix** (stage IB), **Wertheim's radical hysterectomy** with pelvic lymphadenectomy is performed. The radicality of hysterectomy consists in the removal of the **parametrium and part of the vagina** along with the uterus. Again, a bilateral adnexectomy may or may not be included. The point of pelvic lymphadenectomy is a staging examination. It begins with the search for the sentinel node which is histologically examined in the most detail and then with the extirpation of the other macroscopically visible pelvic nodes. The fertility-preserving procedure is **conization**, if the entire tumor is involved, or **trachelectomy**, i.e. removal of most of the cervix. Trachelectomy can be performed if the tumor does not extend closer than 1 cm from the uterine isthmus. This one centimeter is important for maintaining fertility. It is possible to increase the radicality of trachelectomy (**radical trachelectomy**) by removing the parametrium and by the vaginal cuff.

Stage IIB

If the tumor extends **beyond the cervix** (stage IIB), radiotherapy (teleradiotherapy in combination with brachyradiotherapy) is primarily indicated. Surgical treatment can be indicated palliatively and to specify the extent of radiotherapy. Laparoscopic operations are performed with **pelvic lymphadenectomy** to remove metastases and **para-aortic lymphadenectomy** to determine the extent of radiotherapy.

Endometrial carcinoma

If the tumor extends only to the endometrium, a **simple hysterectomy with bilateral adnexectomy** is performed (frequent metastases in the tube and ovaries). If the tumor extends into the myometrium, the benefit of radical hysterectomy may be considered. For **high-risk** cancers (stage IB and higher, grade 3 or 4, serous, clear cell or undifferentiated type), **pelvic and para-aortic lymphadenectomy** is indicate. However, this is an extensive procedure that is not often performed due to the advanced age of patients with endometrial cancer.

Ovarian cancer

There are three stages: *borderline tumor of ovary* (**BTO**), *early ovarian cancer* (**EOC**) and *advanced ovarian cancer* (**AOC**). Surgical treatment is the essential modality for all stages. 80% of ovarian cancers are diagnosed at the AOC stage.

Borderline tumor of ovary

A **simple hysterectomy** with bilateral adnexectomy is indicated for BTO. As a fertility-saving treatment it is possible to perform a unilateral adnexectomy or even only resection of the tumor (if the woman has only one ovary affected by the tumor). Chemotherapy is not indicated.

Early ovarian cancer

With curative intent is performed **hysterectomy, bilateral adnexectomy, omentectomy, appendectomy, pelvic lymphadenectomy and para-aortic lymphadenectomy**. A fertility-preserving procedure can only be performed for stage IA Grade 1 and not for a clear cell or undifferentiated carcinoma; **unilateral adnexectomy,**

omentectomy, pelvic and para-aortic lymphadenectomy are performed. However, if the histological examination is positive, it is necessary to complete the operation in the original manner.

Advanced ovarian cancer

The purpose of surgical treatment is in this case palliative. Median survival is 2 years; ovarian cancer mainly spreads by implantation and lymph. Therefore, the median survival rate doubles upon reaching zero macroscopic residue (stage R0). The surgery is performed on the same scale as for EOC, supplemented with macroscopic *debulging* of metastases, most often **peritonectomy, rectal amputation, mesentery resection, resection of the ileocecal region**, sometimes also **liver resection, diaphragm stripping and splenectomy.**

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Sources

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