

37. ROLE OF NEOADJUVANT CHEMOTHERAPY WITH PLATINUM PREPARATIONS IN ADVANCED OVARIAN CANCER

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Introduction. Ovarian cancer is the second most common and the most lethal gynecologic malignancy. Ovarian cancer is the eight most diagnosed and common cause of cancer-related deaths in the women's world. The frequency of this tumour varies by country and ethnicity. Risk factors that contribute to the development of ovarian cancer include genetic factors - mutations in the BRCA1 and BRCA2 genes, family history of breast or ovarian cancer or factors such as - nulliparity, obesity, diabetes, alcohol consumption, early menarche, late menopause, smoking, endometriosis.

Aim of study. Ovarian cancer is a malignant tumor that develops from ovarian tissue, the cells of which form the epithelium of the ovarian lining diet. Treatment of patients with epithelial ovarian cancer includes surgery and chemotherapy. Previously, the basic method to reduce the size of the primary tumor was surgery and the next step being postoperative chemotherapy.

Methods and materials. Surgery and combination treatment with carboplatin and paclitaxel are the standard of care for patients with newly diagnosed disease, although the use of neoadjuvant chemotherapy is increasing. A systematic review of the literature was performed, using the databases Medline, PubMed, Google Scholar to identify relevant articles, with reference to “ ovarian cancer”, “ diagnosis “, “treatment“.

Results. Surgery and combination treatment with carboplatin and paclitaxel are the standard of care for patients with newly diagnosed disease, although the use of neoadjuvant chemotherapy is increasing. The most commonly used surgical procedures are hysterectomy, bilateral salpingo-oophorectomy and omentectomy. Nowadays, an alternative and successful to primary debulking surgery is platinum-based neoadjuvant chemotherapy. The main role of chemotherapy agents in ovarian cancer is to prevent cancer cells from replicating, forming new metastases and destroying existing cancer cells. In the case of neoadjuvant treatment, chemotherapy will be performed before surgery. Chemotherapy is given in 6 cycles with an interval of 21 days between them. In this way the patient's body has the opportunity to recover until the next treatment cycle. The drug can be introduced intravenously, intraperitoneally or mixed. The platinum-based agent can be combined with chemotherapeutic preparations called taxanes (plaxitaxel, docetaxel) to treat ovarian cancer.

Conclusion. Standard treatment for ovarian cancer is surgery, with a goal of complete tumor resection, and chemotherapy based on platinum compounds and taxanes. Secondary to this takes place the transition of epithelial tissue into mesenchymal and the migration of the ovarian cancer cells. One cause of poor prognosis following chemotherapy treatment is acquired resistance to platinum preparations. The effect of cisplatin can be potentiated by the Bcl-2 inhibitor ABT737, which in turn induces mitochondrial apoptosis in ovarian cancer. The platinum-based neoadjuvant chemotherapy improves oncological outcomes and survival of patients with advanced ovarian cancers.