

## COMPLEX TREATMENT OF EPITHELIAL TUMORS OF THE THYMUS WITH A COMBINATION OF ENDOVASCULAR TECHNOLOGIES

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Epithelial tumors of the thymus occur in the thymus and include thymomas and carcinomas of the thymus. Thymomas are the most common primary tumor in the anterior mediastinum, but are generally rare (1.5 cases / 1,000,000). Although thymomas can spread locally, they are much less invasive than thymic carcinomas. Patients with thymic carcinomas often have metastases. The 5-year survival of patients with thymoma reaches 90%. At the same time, the 5-year survival rate for thymic carcinoma is approximately 55% (NCCN Guidelines. Version 1.2020).

Surgical treatment as an independent method can be used only when there are thymus tumors in encapsulated and minimally invasive tumors in the first degree, rarely in the second degree. In all other cases, patients are subject to combined, complex or conservative treatment. In combined and complex treatment, preference should be given to neoadjuvant methods, which allows to achieve regression of the tumor, reduces its volume, limits the invasion of surrounding tissues, as well as to transform the inoperable process into operability.

Endovascular technologies, namely regional chemotherapy, in the preoperative period, as a preparatory stage, will increase the level of ablactics and antiblactics in surgical treatment of thymus and reduce the percentage of cytostatics on the whole body, as in intravenous administration. At patients with a paraneoplastic syndrome it is necessary to increase term of regression of displays of these syndromes.

Intra-arterial administration of chemotherapeutics has certain advantages:

– cytostatics in the arteries that supply blood to the tumor are injected directly into the affected area, which allows you to significantly increase the concentration of the drug in the tumor itself;

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- reduces the toxic effects of chemotherapy on the whole body;
- longer action of drugs allows long-term contact of the cytostatic with tumor cells at all stages of the cell cycle.

Another main detail of treatment is that after the introduction of the cytostatic, it is necessary to introduce special emboli (microspheres) to block the removal of the chemotherapeutic agent.

The analysis of treatment is taking into account the stage, anamnestic data, the development of clinical manifestations, the results of laboratory and instrumental methods of examination.

According to this analysis, intra-arterial chemoembolization was selected from the complex treatment of thymic epithelial tumors, which, as described above, allows to act directly on tumor cells.

According to our evidence, taking into account clinical and anamnestic (complaints), laboratory, instrumental (CT OGK with IV contrast), certain conclusions were made in the treatment of thymic tumors.

According to our observations, a method of complex treatment of thymic tumors was developed. In this technique, we used regional chemotherapy (namely intra-arterial administration of chemotherapy – cytostatics) as the main method.

Evidence on surgical treatment of benign thymus tumors for 2018–2020 (n = 9):

- With myasthenia – 5 patients;
  - Without symptoms of illness – 4 patients.
- Thoracotomy (thymomectomy, thymectomy) – 5 patients.  
X-ray endovascular operation – 3 patients.  
Conservative therapy – 1 patient.

In a month after treatment, 7 patients had no symptoms of illness.

One patient had complications in the form of recurrence of myasthenia gravis and cerebral edema, which required tracheotomy and resuscitation.

Evidence on surgical treatment of malignant tumors of the thymus for 2018-2020 (n = 5):

- With superior vena cava syndrome – 4 patients.
- Thoracotomy – 1 patient.  
Operation + intra-arterial administration of chemotherapy – 1 patient.  
Radiation therapy + intra-arterial administration of chemotherapy – 1 patient.  
Conservative therapy – 2 patients.  
Died in the early postoperative period – 1 patient.

Died of concomitant complications (brain edema, acute cardiovascular failure) without surgery – 1 patient.

In general, died 2 (40.0%) patients.

**Object of study.** Epithelial tumors of the thymus gland.

**Subject of study.** Indicators of survival and quality of life of patients with malignant thymoma without surgical treatment. The results of radical surgical treatment after regional chemotherapy. Indicators of ablative and antiproliferative. Indicators of results of patients with paraneoplastic syndrome.

**The aim of the study.** Increase the effectiveness of treatment of patients with epithelial tumors of the thymus by using intra-arterial chemoembolization as a neoadjuvant therapy to create ischemia and high concentrations of cytostatics in tumors for a long period of time to achieve devitalization of tumor tissue and reduce overall toxicity of chemotherapy.

**Objectives of the study.**

1. To determine the causes of unsatisfactory results of treatment of patients with epithelial tumors of the thymus using standard methods.

2. Improve the technique of intra-arterial chemoembolization in epithelial tumors of the thymus gland (technology, choice of cytostatics).

3. To study the dynamics of biochemical markers (AFP, HGT) and antibodies to acetylcholine in paraneoplastic syndrome using intra-arterial chemoembolization.

4. To study pathomorphological changes in tumor tissue using intra-arterial chemoembolization.

5. To compare the clinical efficacy (increased tumor operability) of intra-arterial chemoembolization in the complex therapy of patients with epithelial tumors of the thymus gland.

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