PHEOCHROMOCYTOMA: MODERN APPROACHES TO DIAGNOSIS AND TREATMENT

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Pheochromocytoma is a tumor of the adrenal medulla consisting of chromaffin cells that produce catecholamines (adrenaline, noradrenaline, and dopamine).

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Pheochromocytoma is a neuroendocrine tumor of the adrenal medulla that produces an excessive amount of various catecholamines (adrenaline, noradrenaline) [1,2].

The release of catecholamines into the blood leads to vascular spasm, heart palpitations, causing the patient to experience a clinical picture of a hypertensive crisis, which can lead to tragic complications such as a stroke, myocardial infarction.

In 10-15% of cases, pheochromocytomas have a familial form and can be inherited - from parents to children. In 15-20% of cases, pheochromocytoma can be associated with other endocrine tumors (medullary thyroid cancer, parathyroid adenomas, and other hereditary disorders) as part of multiple endocrine neoplasia syndromes [3].

The medullary layer of the adrenal gland is one of the large paraganglia, therefore adrenal pheochromocytomas are a specific case of paraganglioma.

It is known that FCS in most cases produces large amounts of catecholamines, and lack of treatment can lead to cardiovascular and cerebral disorders, even fatal outcomes.

Over time, the growing tumor can cause compression syndrome. Detection of PCH in hereditary syndromes can be a reason for timely diagnosis and treatment of other proband family members [4,5].

The prevalence of malignant pheochromocytoma is 10-17%. The malignancy of pheochromocytoma is determined not by usual morphological and immunohistochemical criteria, but by the presence of metastases in nonchromaffin tissue. In mutations in the gene encoding the B subbirity of succinate dehydrogenase (SDH-B), FHC is malignant in more than 40% of observations [3].

The most important stage in diagnosing PCOS is the timely identification of signs, symptoms, and other manifestations of the disease that may indicate the need for laboratory testing. Suspicion of PCH can be made of symptoms that appear after taking certain medications [4].

Also, indications for the diagnosis of pheochromocytoma are a complicated family history, the presence of PCH/PG in the patient's history,

and the presence of any components of hereditary syndromes associated with PCH [2].

Unfortunately, the diagnosis of pheochromocytoma is not always immediately made. Patients have been unsuccessfully treated for hypertension for a long time. During this time, the reserves of the cardiovascular system are depleted. From the moment the diagnosis is made, a special therapy is selected for the patient, aimed at restoring heart function and lowering blood pressure. This is part of the preoperative preparation. The duration of this stage of treatment is individual: from several weeks to several months.

Upon reaching a safe level of cardiovascular function for surgery, surgical treatment is performed, consisting of removing the pheochromocytoma. The operation is performed laparoscopically.

The main difficulty of the operation is that when the tumor is removed, blood pressure can rise, which cannot be controlled with conventional hypotensive agents. A perfect technique for administering anesthesia is required. Therefore, such operations should only be performed in endocrine surgery centers where all necessary equipment is available.

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