



Characteristics of Posterior Cranial Fosse Meningiomas and their Correlation with Neurovisual Data

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Meningiomas are a group of tumors that originate from the meninges and are not found in other tissues of the body. Despite significant progress in neurosurgery since the beginning of the development of neurosurgical treatment of posterior fossa meningiomas (MFP), MFP remains one of the most difficult pathologies in terms of their surgical treatment [1-5].

MFP make up about 1-2% among intracranial formations and 7% of all intracranial meningiomas [5-9]. According to the localization of the place of initial growth, they are divided into meningiomas of the posterior surface of the pyramid of the temporal bone, clivus (according to their common features, some authors combine them into one group of petroclival meningiomas), the convexital surface of the cerebellum, the foramen magnum, the region of the transition of the transverse sinus to the sigmoid [10,11].

According to the histological structure, MFPs are more benign than meningiomas of other localizations, which, first of all, is reflected in their slow growth and, as a result of the rather late manifestation of the first symptoms of the disease, this determines their late diagnosis: in more than half of patients with this pathology at the time of detection, the sizes tumors exceed 25 mm. Its structure often includes surrounding brain structures, including the brainstem, cranial nerves, and the great vessels of the base of the skull. They spread into the canals of the skull base (jugular foramen, Dolero canal, internal auditory meatus), through the tentorial foramen into the middle cranial fossa, which greatly complicates total removal without compromising the quality of life of the patient [12-17].

Neurosurgeons resort to three main methods of treatment: conservative, surgical and radiological. To choose the right approach, it is necessary to take into account criteria such as the patient's age, tumor size, neurological and somatic status in each individual case.

Speaking about the conservative treatment of MFP, neurosurgeons mean dynamic monitoring of the patient, periodic assessment of the neurological status, CT and / or MRI studies at different frequencies to monitor tumor growth. Quite often MFP have an asymptomatic course and are a diagnostic finding. In such cases, dynamic observation is the method of choice: with a stable tumor size and the absence of negative dynamics in the patient's neurological status, refusal of any other treatment is justified [18-21].

Radiotherapy treatment for non-operated MFP as a separate method is not used. To date, several series of observations have been published in which patients with MFP underwent radiation therapy. However, none of these studies were randomized and prospective, only some of them have a sufficient duration of follow-up, confirming the positive value of radiotherapy [21-27].

After the introduction of radiosurgery, radiological methods are used in the treatment of MFP as an adjunct to surgical intervention in the case of partial tumor removal and as the main method for small tumors. Precise focusing made it possible to reduce the radiation load on healthy brain tissue, primarily on the brain stem, while increasing the dose to the tumor tissue.

Technical progress at the end of the 20th century, the widespread use of neuroimaging research methods (CT, MRI), the introduction of microsurgical techniques for removing tumors, and the achievements of anesthesiology have greatly improved the results of treating this pathology. However, according to different authors, only in half of the cases it is possible to perform a total removal of the tumor without an increase in neurological symptoms. The infiltrative nature of tumor growth, in which the pial membrane of the brain grows, also excludes the possibility of their radical removal without an increase in neurological symptoms or the development of postoperative complications that threaten the patient's life and reduce its quality. Since surgical treatment of MFP is the main method of treating the disease, there is a need for a correct preoperative assessment of various characteristics of the tumor that affect the radicalness of the operation, such as the hardness (surgical density) of the tumor, the degree and sources of its blood supply, the size of the matrix, the nature of the borders, and spread to the base structures. skulls. Their correct assessment, taking into account the expanding possibilities of radiosurgery, will reduce the risk of the operation being performed due to adequate planning of the surgical intervention, including the choice of surgical approach and radical removal [28-30].

At department of Neurosurgery Samarkand State Medical University has accumulated rich experience in the diagnosis and surgical treatment of meningiomas of the posterior cranial fossa. The introduction of modern surgical approaches has improved the quality of treatment of patients, reduced postoperative complications and surgical mortality. Modern methods of neuroimaging can significantly improve the accuracy of the diagnosis and correctly plan the surgical operation. However, for the correct interpretation of the data obtained by CT and MRI, it is necessary to know the features of the neuroimaging pattern in tumors of various localizations.

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