

## **STUDY OF THE QUALITY OF LIFE OF PATIENTS WITH MENINGO-VASCULAR BRAIN TUMORS IN THE BEFORE AND POSTOPERATIVE PERIOD**

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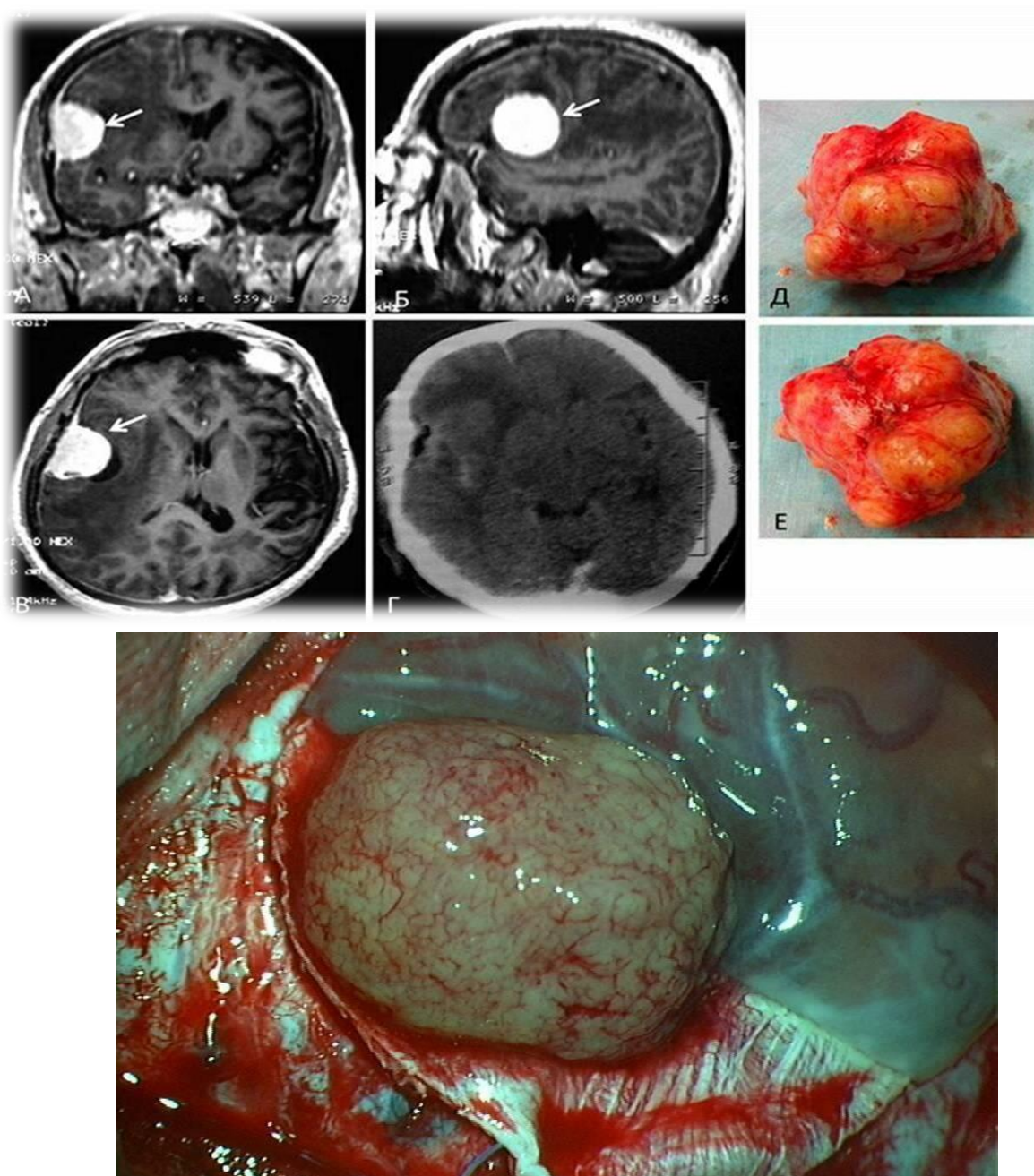
### **Introduction**

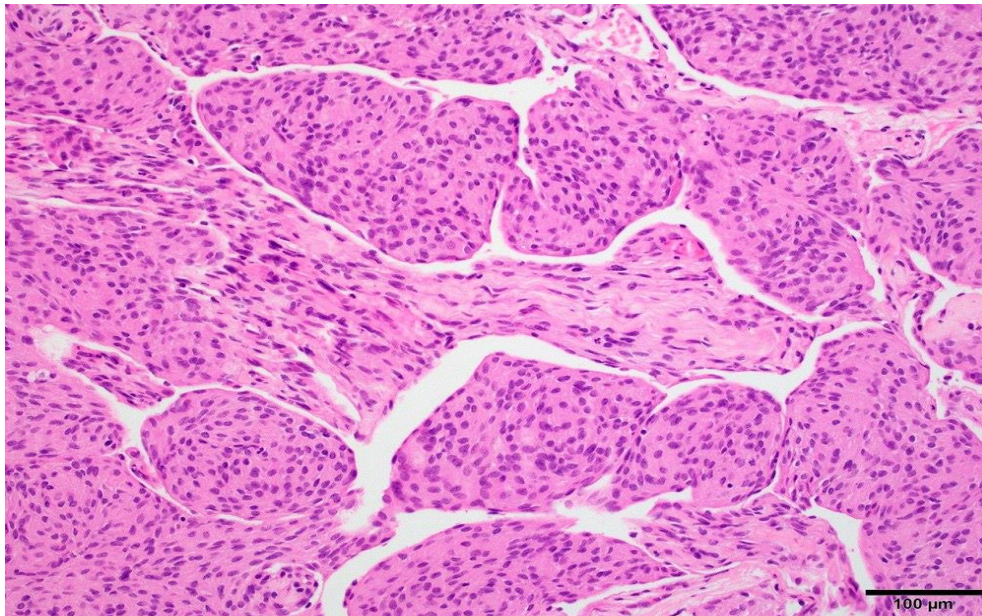
*Meningiomas account for 13.0–36.6% of all known tumors affecting the central nervous system [1]. They occupy 2nd place in the composition of oncological processes occurring in the brain (GM) [1, 2]. They are characterized by manifestation in old age. In the group of histologically benign tumors, meningiomas are the leaders, making up up to 53.2%. According to the World Health Organization classification, meningiomas are divided into 3 histological subgroups: Grade I (typical) – 81.1%, Grade II (atypical) – 16.9%, and Grade III (anaplastic) – 1.7%. Most often, meningiomas are located convexitally (35%), parasagittally (20%) and sphenoidal (20%); less often they can be found in the area of the sella turcica (3%), intraventricularly (5%), subtentorially (13%), as well as in other areas (4%) [3]. After total removal of meningioma, the patient's quality of life improves, its duration and time before possible relapse. Subtotal resection leads to relapses and reducing the life expectancy of patients. The 10-year survival rate for meningiomas is up to 57.1%, and in young patients the figure rises to 77.7%. These figures mostly include patients with Grade II and III anaplastic meningiomas, as well as tumors that could not be completely resected. In patients with radically removed histologically with typical meningioma (Grade I), survival and quality of life are undoubtedly higher [4]. Combination treatments are increasingly being used patients with meningiomas [5–8]. In the world literature, there is active discussion of radiation therapy (RT) for small meningiomas or a combination of open surgery with radiosurgery for irradiation of non-removed the remainder of the tumor [4, 9, 10]. A number of authors report histological degeneration of meningiomas in young patients and their transition to a higher Grade, which leads to a worse prognosis in such patients [9]. Localization of meningiomas near radiation-sensitive structures of the brain complicates the use of radiation therapy, and systemic and local toxicity during RT have side effects, in particular deterioration of the cognitive functions of patients [4, 11–13]. Treatment of meningiomas is complicated when the tumor invades the sinuses of the brain. In this case,*

reconstruction is necessary to completely remove the tumor. sinus to maintain adequate venous outflow from brain tissue [3]. In this situation it is necessary maintain a balance between radical tumor removal and possible complications [14]. Venous system GM, unlike arterial one, is extremely variable and has great adaptability due to collateralization of blood flow, however, if large sinuses are affected, it may be necessary to supplement surgery with revascularization surgery [15–17]. **Purpose of the study** -assessment and analysis of the quality of life of patients with various meningiovascular diseases of the brain in the pre-postoperative period.

### Materials and Methods

This study was carried out on patients hospitalized in the period 2018-2024, who underwent surgical treatment for meningiovascular brain tumors (MCVT) in the Department of Neurosurgery of the Multidisciplinary Clinic of SamSMU. A study was carried out on 150 patients (87 women and 63 men aged from 37 to 65 years) with MSOG. The diagnosis of the studied patients was based on clinical and laboratory data, data from radiation and instrumental research methods in the pre- and postoperative period.





## Results

The average age of the patients was 57 (49-60) years. The average duration of surgical intervention in the studied patients was 180-240 minutes. The duration of hospitalization of the study subjects was 10-14 days. All patients underwent MRI of the brain with contrast in the pre- and late postoperative periods to assess the location of the tumor matrix, clarify its size, directions of spread, and the presence of tumor recurrences. Most often identified by the location of brain meningiomas in 67 (44.7%) of the studied patients was localized in the frontal lobe, parietal lobe in 45 (30.2%), temporal lobe in 23 (15.7%), posterior cranial fossa in 15 (10.4%). The following approaches were used to remove brain meningiomas: parasagittal, subfrontal, subtemporal, orbitozygomatic-temporal, supraorbital, retrosigmoid, median. In 92 patients studied, after surgical treatment, no tumor remnants were detected on MRI of the brain, which confirmed the complete removal of the tumor. The degree of radicality of the operations was assessed according to the generally accepted classification by D. Simpson: degree I - total removal of the tumor along with the matrix in 36.2% (54) researched; Grade II - total tumor removal with matrix coagulation in 50.9% (76); III degree - partial removal of the tumor in 5.34% (8); IV degree - decompression is divided into subtype A - subtotal removal leaving minimal fragments in 4.0% (6) patients and subtype B - partial removal 2.67% (4); Grade V - biopsy 0.67% (1). Analysis of changes in quality of life was carried out in patients in the preoperative period, early (the first 5-7 days after surgical treatment - the moment of discharge from the hospital) and late postoperative periods (3-6 months after surgery). The general condition of the patients was assessed before surgery and after surgery using the Karnofsky scale. It describes the patient's level of functional status in terms of ability to care for oneself, activities of daily living, and physical activity. The studied patients had a neurological deficit on the Karnofsky scale of 50 points before surgery; after 1 week, 60 points in 27 (18%) patients after surgery. Before surgery, the Karnofsky scale was expected to be 60 points, after 2 months 70 points in 45 (30%) patients after surgery; In patients before surgery, the Karnofsky scale was 70 points; after 6 months, 80 points were recorded in 78 (52%) patients after surgery.

Conclusions: A study of the quality of life of patients with MSOG before and after the surgical period showed:

1. The level of quality of life of patients increases in the period up to 2 years after surgery and then stabilizes.
2. The dynamics showed the quality of life after the operation and the anamnesis coincides with the dynamics of the results of assessing the general condition on the Karnofsky scale.
3. There are higher quality of life indicators in people over 35 years of age after surgery.

### Conclusion

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