

УДК: 616.831-006.328-089

Rasulov Zhakhongir Mansurovich

Department of Pediatric Traumatology, Orthopedics and Neurosurgery

Andijan State Medical Institute

RESULTS OF SURGICAL TREATMENT

HISTOLOGICAL VARIANTS OF BRAIN MENINGIOMA

Resume: Despite the great successes and achievements in microsurgery of parasagittal meningiomas, the problem of their surgical treatment is still relevant all over the world due to the development of both frequent intra- and postoperative complications, the high frequency of their recurrence, which in turn leads to the need for re-operations. All this affects the quality of life of patients.

This article presents an analysis of the results of surgical treatment of this category of patients using a neodymium laser and comparison with similar patients operated on traditionally.

The use of a laser at the stages of tumor removal made it possible to significantly increase the radicality of the operation, reduce the risk of relapses, and also led to a significant improvement in the quality of life of patients after surgery and in the long term.

Keywords: meningioma, brain, histological changes, localization.

Расулов Жахонгир Мансурович

Кафедра детской травматологии, ортопедии и нейрохирургии

Андижанский государственный медицинский институт

РЕЗУЛЬТАТЫ ХИРУРГИЧЕСКОГО ЛЕЧЕНИЯ

ГИСТОЛОГИЧЕСКИЕ ВАРИАНТЫ МЕНИНГИОМЫ ГОЛОВНОГО МОЗГА

Резюме: Несмотря на большие успехи и достижения в микрохирургии парасагиттальных менингиом, проблема их оперативного лечения все же еще актуальна во всем мире из-за развития как частых интра-, так и послеоперационных осложнений, высокой частоты их

рецидивирования, что в свою очередь приводит к необходимости реопераций. Все это отражается на качестве жизни пациентов.

В данной статье приведены анализ результатов оперативного лечения этой категории больных с использованием неодимового лазера и сопоставление с аналогичными пациентами, оперированными традиционно.

Применение лазера на этапах удаления опухоли позволило значительно увеличить радикальность операции, снизить риск рецидивов, а также привело к значительному повышению качества жизни пациентов после операции и в отдаленном периоде.

Ключевая слова: менингиома, головной мозг, гистологическая измененения, локализация.

Introduction. Meningiomas (M), according to literature data, account for 18-34% of primary brain tumors, second in frequency only to tumors of the neuroectodermal series [3]. The term "parasagittal meningiomas" was proposed by Cushing H. in 1922 to refer to tumors located along the upper longitudinal sinus and emanating from its walls. They can germinate into its lumen, spread in one or both directions. Parasagittal also include M of the sickle-shaped process, which secondarily affect the walls of the upper sagittal sinus (SCS), spread very significantly along the dorso-lateral surface at the midline. The frequency of occurrence of parasagittal meningiomas (PSM) ranges from 20.5 to 40.0% of all cerebral cerebral hemispheres [1].

In cases of PSM with SCD lesion, the study of the literature data allows us to state that to date there is no surgical standard for their treatment. PSM located in the middle third of the sinus are the most difficult to remove. This is caused by an abundance of afferent veins, the occurrence of a serious neurological deficit associated with the localization of M, and a high risk of relapse [2]. According to the study of Tiglieva G.S., Mozhaeva S.V. and others, in 28.8-47.5% of cases, patients after surgery have neurological disorders, and in 18.6%

of the total remain profoundly disabled [5]. There is still no clear surgical strategy for the invasion of meningioma in the SCD.

Significant difficulties lie in the treatment of patients with passable SCD. At the time of surgery, it is sometimes difficult for the surgeon to make a decision to remove the part of the tumor that is located in the sinus cavity. There are two surgical strategies for this: maximum safe removal of the tumor outside the sinus and aggressive surgical resection of a part of the sinus with its subsequent reconstruction [4]. Thus, it is possible to perform a radical operation with PSM only in cases of a small marginal lesion of the SCD [2]. In all other situations (with rare exceptions), the removal will not be radical [5].

Due to the limited capabilities of traditional methods of radical removal of PSM, there is a greater number of their recurrence and continued growth than with M of any other localization, reaching 50% depending on the follow-up period [2].

The purpose of the study. Improving the effectiveness of surgical treatment of patients with diffuse toxic goiter by creating a system that includes modern preoperative preparation, modified/tactics of surgical intervention and correction of postoperative functional disorders.

Materials and methods of research. To accomplish this task, we selected 65 patients with meningiomas of the brain and conducted examinations on them.

The results of the study. The dynamics of focal neurological disorders was studied in 65 patients initially operated for PSM. Before the operation, most of the patients in both groups with focal symptoms were patients with localization of PSM in the projection of the central gyrus (the middle third of the SCD). They had focal motor neurological deficit. So, in the group where traditional methods of surgery were used, it was diagnosed in 58.2%, and in the study group in 59.1% of people ($p=1.0$).

The performed operation led to a temporary increase in the number of patients with focal symptoms, regardless of the method of tumor removal, but these indicators between the groups were not statistically significant ($p=0.7068$). So, in the comparison group, it increased to 77.6% and to 73.9% in the study group. Against the background of ongoing rehabilitation therapy in the long-term period, regression of neurological prolapses is noted in all patients, but statistically the best results were obtained in the research group. By this time of observation, only 37.5% of people had motor disorders, mainly mild, while in the comparison group they persisted in 55.2% of patients with a predominance of moderate and deep mono- and hemiparesis ($p=0.0345$).

Initially, sensory disorders in both groups did not differ statistically from each other. The performed surgical intervention increased the number of these violations: from 23.88% of cases to 43.28% in the comparison group and from 23.86% to 36.36% in the study group ($p=0.4101$). Sensitive disorders, despite complex rehabilitation therapy, were more persistent and in the long-term postoperative period in the study group were found in 18.2% and 22.39% of people in the comparison group ($p=0.5480$).

The analysis of the quality of life of operated patients of both groups on the Karnovsky scale showed that they were initially comparable in this indicator and did not differ statistically from each other. In the study group, it was equal to 62.68 ± 0.62 points, in the comparison group - 61.71 ± 1.03 points. In the early postoperative period, against the background of rehabilitation therapy, regression of neurological prolapses occurred in all patients. The most pronounced and statistically significantly significant regression was noted in the study group, therefore, already at discharge from the hospital, the quality of life index in patients operated with a laser was equal to 70.26 ± 1.11 points. In the comparison group, it corresponded to 65.48 ± 1.28 points.

In the long-term postoperative period, as a result of rehabilitation therapy, statistically significant regression of focal neurological symptoms and a

decrease in the incidence of epileptic seizures in patients in the study group continued. In this regard, their average quality of life index rose to 81.34 ± 1.04 points, while in the comparison group it stabilized at 72.6 ± 1.68 points.

Currently, the immunohistochemical method continues to develop actively, taking a strong place among diagnostic methods in oncology. Thanks to immuno-staining, a pathologist can not only determine the cytogenetic source and the degree of malignancy of the tumor, but also detect pathological proteins - products of transcription of damaged DNA sections and make recommendations for the appointment of targeted therapy. Modern neuro-oncology is unthinkable without pathomorphological verification, and patient treatment tactics are often determined by the complex interaction of a pathologist and a neurosurgeon. In many foreign clinics, the neurosurgeon himself examines the histological material obtained and can confirm or question the conclusion of the pathologist. Histological and immunohistochemical aspects of meningiomas are a priority in the study of the mechanisms of pathogenesis of this group and the search for targets for targeted therapy, taking into account the synthesis of protein products as a result of molecular genetic damage. Significant progress in this direction brings us closer to the time when targeted effects on the molecular links of the development of not only meningiomas, but also other primary tumors of the central nervous system will allow us to achieve a significant increase in patient survival.

Conclusion. Thus, a large range of morphological characteristics is inherent in meningiomas, which ultimately determine the type and degree of malignancy of this group of brain tumors. Anaplastic meningiomas are particularly difficult to study. This type of tumors has a number of similarities with soft tissue malignant neoplasms (cancer, sarcoma, melanoma) and it is not possible to distinguish them from each other without immunohistochemistry.

LIST OF LITERATURE:

1. Бывальцев В.А., Степанов И.А., Белых Е.Г. Биология менингеальных опухолей головного мозга // Сибирский медицинский журнал. - 2015. - № 3. -С. 15-19.
2. Древаль О.Н. Нейрохирургия: руководство для врачей. - М.: Литерра, 2012. - 592 с.
3. Artlich A, Schmidt D (2017). Immunohistochemical profile of meningiomas and their histological subtypes. Hum Pathol, 21, 843-849.
4. Kepes JJ, Moral LA, Wilkinson SB, Abdullah A, Llena JF (2018). Rhabdoid transformation of tumor cells in meningiomas: a histologic indication of increased proliferative activity: report of four cases. Am J Surg Pathol, 22, 231-238.
5. Zorludemir S, Scheithauer BW, Hirose T, Van Houten C, Miller G, Meyer FB (2015). Clear cell meningioma. A clinicopathologic study of a potentially aggressive variant of meningioma. Am J Surg Pathol, 19, 493-505.