

Multiple primary malignancies in neurosurgical patients - the experience of the Federal Neurosurgical Center, Novosibirsk

Alexander Dmitriev, Sergey Chernov, Jamil Rzaev, Anton Kalinovskii, Alexander Zotov, Ekaterina Gormolysova, Elena Uzhakova

Department of Neurooncology, Federal Neurosurgical Center, Novosibirsk, Russia

OBJECTIVE: To identify the role of neurosurgery in the diagnosis and its influence on the treatment in patients with multiple primary malignancies.

METHOD: 17 patients with brain tumors have been operated from December 2012 to the present. Brain tumor was combined with malignancies in other organs in all patients. Patient's age ranges from 47 to 76 years (mean age 59.8). 12 of these patients were women - 70.5% and 5 - men (29.5%). All patients were directed to our center by oncologists with a history of one or two malignant tumors.

RESULTS: Among all patients, malignant brain tumors were noted in 70.5 % (12 patients), benign – in 29.5 % (5 patients). All benign brain tumors were meningiomas. Malignant tumors had different histological structure: glioblastoma - 58,5% (7 cases); B- cell lymphoma - 8.3 % (1 case); poorly differentiated tumor - 8.3% (1 case); melanoma metastasis – 8,3% (1 case); glandular cancer metastasis 16.6% (2 cases). After morphological verification of brain tumor a discrepancy in the program of specific therapy was noted in all cases compared to the proposed course of treatment without neurosurgical procedure. Moreover, in cases of meningiomas (5 patients), postoperative treatment was not required. Conversely, in 2 patients the localization of primary tumor and presence the brain lesion assumed the refusal of adjuvant therapy. But after neurosurgical treatment and verification of the histology, these patients underwent a full course of chemotherapy and radiotherapy.

DISCUSSION: Modern radiotherapy and chemotherapy is widely and effectively used in the treatment of malignant tumors. Each of these methods exposes the patient's body to powerful carcinogen treatment, which can lead to the development of new cancer. Because of the subjective diagnostic errors prevalence of the process may be installed incorrectly. Exaggerated stage of simultaneously existing tumors leads to a tactical mistakes, which include the unjustified refusal of necessary treatment.

CONCLUSIONS: The verification of the morphological structure of any brain lesion is necessary, despite the oncological history, as it allows determining the correct further treatment.

	Not CNS tumor	CNS tumor	Amount of tumors in the brain	Treatment of the first identified MPM	Conducted therapy after removal of brain tumor	Standart therapy (without verification of morphological diagnosis of brain tumor)
Patient K. 74 yr	pancreatic cancer T2NxM0	glioblastoma of left temporal lobe	1	not performed	radiation therapy for brain tumor and chemotherapy for brain and pancreatic cancer	<u>symptomatic therapy</u>
Patient P. 58 yr	adenocarcinoma of lung T2N2M0; carcinoma of scalp T2N0M0	metastasis of adenocarcinoma to the chiasma and sellar area	1	lobectomy of right lung, radiation therapy for lung cancer, photodynamic therapy for scalp cancer	radiation therapy for brain tumor and polychemotherapy for lung cancer	chemotherapy for lung cancer
Patient S. 53 yr	cancer of the thyroid T1N0M0.	parasagittal meningioma	1	thyroidectomy	<u>observation</u>	chemotherapy for thyroid cancer
Patient C. 49 yr	squamous cell carcinoma of lower lip T2N0M0	multiple metastasises of glandular cancer to brain, without identifying primary lesion	4	combined therapy for cancer lower lip (surgery, radiation therapy)	chemotherapy for metastasis of glandular cancer	chemotherapy for metastasis of squamous cell carcinoma to lips
Patient P. 73 yr	poorly differentiated adenocarcinoma of stomach T1N0M0	glioblastoma of left parietal lobe	1	surgical treatment of gastric adenocarcinoma	radiation therapy and chemotherapy for brain tumor; gastrectomy	<u>symptomatic therapy</u>
Patient C. 54 yr	malignant carcinoid of lung	melanoma metastasis to occipital lobe, without identifying the primary lesion	1	surgical treatment of lung cancer, excision of melanoma metastasis to chest wall; immunotherapy and chemotherapy for melanoma	chemotherapy and immunotherapy for melanoma	immunotherapy for melanoma
Patient S. 56 yr	cancer of the transverse colon T3N0M0	glioblastoma of the right frontotemporal area	1	resection of the colon	radiation therapy and chemotherapy for brain tumor	chemotherapy for colon cancer
Patient D. 50 yr	breast cancer T3N2M0	B-cell lymphoma of the cerebellopontine angle	1	combined therapy for breast cancer	chemotherapy for lymphoma	chemotherapy for cancer breast
Patient G. 57 yr	breast cancer T3N2M0	multifocal glioblastoma of parietal lobe	2	complex therapy for breast cancer	radiation therapy and chemotherapy for brain tumor	chemotherapy or hormonal therapy for breast cancer
Patient G. 68 yr	prostate cancer T2N0M0	poorly differentiated tumor of frontal bone; tumor of cerebellopontine angle (unknown)	2	radiation therapy for prostate cancer	radiation therapy and chemotherapy for poorly differentiated tumor of frontal bone	chemotherapy and hormonal therapy for prostate cancer
Patient G. 47 yr	melanoma skin of shin T2N0M0	sphenoid wing meningioma	1	surgical treatment for melanoma skin of shin	<u>observation</u>	chemotherapy or immunotherapy for melanoma
Patient H. 62 yr	colon cancer T2N1M0	glioblastoma of left fronto-parietal area	1	combination therapy for rectal cancer	radiation therapy and chemotherapy for brain tumor	chemotherapy for rectal cancer
Patient G. 58 yr	lung cancer of the right lobe T2N0M0	glioblastoma of the left parietal-occipital area	1	combined treatment for lung cancer	radiation therapy and chemotherapy for brain tumor	radiation therapy for brain tumor and chemotherapy of lung cancer
Patient S. 76 yr	cancer of the sigmoid colon T3N1M0	glioblastoma of the left parietal lobe	2	surgical treatment for cancer of the sigmoid colon	radiation therapy and chemotherapy for brain tumor	chemotherapy for cancer of sigmoid colon
Patient P. 50 yr	hepatocellular carcinoma T4N0M0	multiple meningiomas (3) of the brain	3	surgical therapy for liver cancer	<u>observation</u>	chemotherapy for liver cancer
Patient T. 56 yr	uterine cancer; cancer of liver angle colon T3N0M0	sphenoid wing meningioma	1	surgical therapy for colon cancer; combined therapy for cancer corpus uteri	<u>observation</u>	chemotherapy for colon cancer
Patient P. 60 yr	colon cancer T2N1M0	meningioma of skull base	1	combination therapy for rectal cancer	<u>observation</u>	chemotherapy for rectal cancer

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