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Extracranial Metastasis of Glioblastoma: A Case Report

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Abstract **Case Report**

Glioblastoma is the most frequent malignant neoplastic pathology among glial neoplasms, extra neural metastases are atypical, presenting in 0.2 to 2% of cases, risk factors include recurrence of the neoplasm, early age of the patient, and prolonged survival. The most frequent localization sites of metastases are lungs, cervical lymph nodes, bone tissue. This article details the case of a 36-year-old patient with no history of previous disease who presented tonic-clonic seizures. In extension tests, a right frontal intracranial tumor was observed. It was decided to perform resection of the tumor with pathology results that indicated a grade IV right frontal glioblastoma, presents a recurrence of the disease, for which reason a surgical reintervention is warranted and subsequent treatment with radiotherapy and chemotherapy one year after the second surgery, a right temporal extracranial lesion is evidenced, which was biopsied and reported as glioblastoma with a component primitively, resection of the tumor mass was chosen with the double scalpel technique and reconstruction with a cervicofacial flap and skin graft. Late post-surgical patient with adequate pain control, without signs of inflammatory response, without evidence of neurological deficit, is discharged.

Keywords: Glioblastoma, metastasis, head and neck.

INTRODUCTION

High-grade gliomas are malignant primary brain tumors, generally rapidly progressive, the symptoms are progressive and variable according to the location of the intracerebral tumor, among the most frequent symptoms are headache, seizures, memory loss, motor weakness, visual symptoms, alteration language and personality changes [2]. In the treatment of glioblastoma surgery, radiotherapy and chemotherapy intervene, the presence of extracranial metastasis is an indicator of poor prognosis [3].

CASE PRESENTATION

A 36-year-old patient with no history of previous disease who presented tonic-clonic seizures, in extension tests, a right frontal intracranial tumor was observed, it was decided to perform resection of the tumor lesion with pathology results that indicated a grade IV right frontal glioblastoma, presenting recurrence of the disease therefore warrants surgical reintervention and subsequent treatment with radiotherapy and chemotherapy one year after the second surgery, a right temporal extracranial lesion was evidenced, which was biopsied and reported as glioblastoma with a primitive component, it was decided to perform resection of the tumor mass more reconstruction with cervicofacial flap and partial thickness skin graft from the right inguinal region, during the surgical procedure a tumor mass of 9x8x6 centimeters located in the right temporal region ulcerated in the skin was evidenced, an elliptical incision with double scalpel technique was used for resection and excision of the skin margin of the tumor mass in a sectorized halo in a clockwise direction, which are sent to biopsy by freezing, reporting free of tumor (Figure 1).

Figure 1: Cutaneous margin of tumor mass in halo sectorized in a clockwise direction, tumor-free edges

The tumor mass presented easy release of the fascia of the temporal muscle, no invasion into deep planes was observed, enlargement margins were performed in the patient at the preauricular level, temporal fascia, retrociogomatic fat, and periorbital fat, it was sent for frozen biopsy, reporting negative results for malignancy (Figure 2). The reconstructive procedure was carried out with lifting of the cervicofacial flap in the SMAS plane on the face and subplatysmal on the neck (right side) (Figure 3).

Figure 2: Resection of a 9x8x6 centimeter tumor mass located in the right temporal region ulcerated on the skin

Figure 3: Lifting of the cervicofacial flap in the SMAS plane on the face and subplatysmal on the neck (right side)

In addition, a skin flap of approximately 5x2.5 centimeters is obtained from the inguinal fold, the partial thickness free graft is fixed in the right temporal region, Brown's healing dressing is placed and fixed at the level of the skin graft, a Jackson drain is left pratt extended from the cervical region to the right temporal region (Figure 4). The patient is discharged on the fifth post-surgical day with adequate pain control, without signs of inflammatory response, and without evidence of neurological deficit.

Figure 4: Reconstruction with cervicofacial flap and partial thickness skin graft

DISCUSSION

Multiform glioblastomas are aggressive tumors that affect the central nervous system. Treatment includes surgical resection and chemoradiotherapy, however their morbidity and mortality is high [1]. The symptoms are variable, but when the central nervous system is compromised, symptoms such as headache, seizures, memory loss, motor weakness, visual symptoms, language alterations, and personality changes occur [2].

Extracranial metastases from glioblastoma are rare, occurring in 0.2 to 2% of patients, their presence is considered a sign of advanced disease, and they frequently occur between 8 and 24 months after initial diagnosis [3]. This correlates with the case of our patient presenting the metastasis 20 months after the appearance of the symptoms associated with glioblastoma [1,3].

The infrequency of extraneural metastases is due to protective mechanisms that isolate the CNS signaling the blood-brain barrier, the protective dura mater, and the absence of lymphatic vessels. A relationship between intracranial tumor lesions, surgical intervention and the presence of metastasis has been mentioned, alluding to the fact that tumor cells come into contact with extraneural blood vessels and lymphatic vessels, increasing the probability of systemic dissemination and seeding of extraneural tumors [3].

CONCLUSION

Extracranial metastasis of glioblastoma multiforme is a rare pathology, indicating on multiple occasions a terminal state of the disease, however their treatment improves the quality of life of these patients.

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