Meningioma scalp metastases

Scalp metastases of meningiomas seldom have been reported.

Avecillas-Chasin et al report a series of 4 cases of this rare event and discuss the relevant potential risk factors.

They performed a retrospective review of patients treated for scalp metastases of meningiomas at our institution. A literature review was performed for the terms “scalp meningioma,” “cutaneous meningioma,” “skin meningioma,” “extracranial meningioma,” and “subcutaneous meningioma.”

Four patients showed scalp metastases of recurrent meningiomas with the following associated clinical features: multiple reoperations (n = 4), immunosuppression (n = 2), radiation therapy (n = 3), surgical wound complications with cerebrospinal fluid fistula (n = 2), and histologic grade progression (n = 2). The timescale for development of scalp metastasis was between 5 months and 13 years after intracranial meningioma surgery. In all cases, the metastases were located close to the surgical scalp incision for the craniotomy. Previously, 11 cases of meningioma with scalp metastasis, with similar features to those described here, were reported in the literature.

Spreading of meningioma cells during surgery is a possible mechanism for scalp metastases of recurrent meningiomas. Factors associated with scalp metastases include reoperations, immunosuppression, radiation therapy, torpid course of the surgical wound with cerebrospinal fluid fistula, and histologic progression. Awareness of these features is advisable for neurosurgeons involved in the care of patients with similar profiles [1].

Case reports

A 69-year-old man presented with an atypical meningioma scalp metastases. Six years after the right frontoparietal meningioma lesion was completely resected, an isolated subcutaneous metastasis developed at the right frontal region of the scalp, originating at the scar left by the first surgery. Postoperative histological examination of the subcutaneous tumor revealed the features of an atypical meningioma.

This study highlights that resection of meningiomas is still associated with a risk of iatrogenic metastasis. Surgeons should carefully wash out the operative field and change surgical tools frequently to avoid the potential risk of metastasis [2].

A 79-year-old man presented with a large subcutaneous mass in the midline parietooccipital region and progressive right hemiparesis. The contrast-enhanced millimetric computed tomography scans of the head showed the intracranial parasagittal enhanced mass invading the superior sagittal sinus and the subcutaneous mass without any bony destructive, osteoblastic, or osteolytic changes. Under the operative microscope, no visible communication was found between the intracranial and extracranial mass lesions. Histopathologic examination of both intracranial and extracranial tumors demonstrated the same atypical meningioma (World Health Organization grade II). The possible route of extracranial extension of the tumor may be the sizable parietal foramen [3].

Li et al present a rare case of a giant malignant meningioma with multiple recurrences. The patient was a 73-year-old woman who was evaluated to have a malignant meningioma of the frontal part of the skull 3 years before being admitted to our hospital and received surgical treatment. The tumor recurred 3 years after the first surgery and was classified as a giant meningioma on admission to our hospital. We performed total resection of the giant meningioma and reconstructed the defect with artificial dura, skull, and a local rotating flap. The patient recovered and lived well for 1 year. However, 15 months after surgery, the patient died of the recurrent tumor after refusing any treatment. Meningiomas are usually common and benign intracranial tumors; however, the anaplastic subtype of meningiomas is rare and malignant. Despite the high rates of recurrence and metastasis, surgery is still an option. For giant invasive tumors, the cooperation of neurosurgeons and plastic surgeons is essential [4].

References

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