Intraosseous meningioma mimicking a metastasis

Vanessa Tang,¹ Maggie Lam,² Annie Lai³

¹EBNS, Berkeley, California, USA

²Department of Pathology, Alta Bates Medical Center, Berkeley, California, USA

³Department of Radiology, Alta Bates Medical Center, Berkeley, California, USA

Correspondence to

Vanessa Tang,
g2tang@yahoo.com

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DESCRIPTION

In an elderly woman with a history of malignancy, a skull lesion is most often thought of as metastasis. Bone involvement is found in 70% of postmortem examinations of patients with cancer.¹ The discovery of presumed metastatic disease portends a poor prognosis, especially in the elderly and may direct care towards hospice. This case highlights a benign mimic of metastatic disease.

We present a case of an 82-year-old woman with a history of breast cancer 8 years ago who presents with increasing confusion and worsening gait. She had undergone a mastectomy with axillary lymph node dissection followed by radiation. She denied

Figure 1 A non-contrast CT of the head demonstrating an osteolytic mass in the right parietal bone.

Figure 2 The MRI showing a lytic lesion with enhancing soft tissue component in the right parietal bone.

Figure 3 Pathology reveals monotonous cells with round to oval nuclei, inconspicuous nucleoli and pink syncytial cytoplasm forming vague swirls. Psammomatous calcifications were noted.

headache or focal neurological deficits. On examination, she exhibited poor attention and memory but her examination was otherwise non-focal.

Imaging by CT and MRI demonstrated an osteolytic mass in the right parietal bone (figures 1 and 2). A positron emission tomography (PET) CT failed to show any evidence of a hypermetabolic lesion. Cancer antigen 15-3 was within normal range. A biopsy revealed a meningothelial meningioma (figure 3). Her waxing-and-waning clinical course over the subsequent 10 months suggests dementia as the primary diagnosis.

Intraosseous meningiomas are rare and are thought to arise from trapping of arachnoid cells within the developing calvaria. Less than 20 cases have been reported and in only two other cases did they mimic a metastasis.^{2 3} Serial imaging could have been a reasonable alternative to a biopsy. In this case, biopsy provided a definitive conclusion that facilitated planning for the patient's care.

Learning points

- ▶ Intraosseous meningioma should be considered in the differential diagnosis of a lytic skull lesion.
- ▶ In the setting of otherwise quiescent systemic disease, a negative positron emission tomography CT and a solitary lesion intraosseous meningioma should be considered.
- ▶ A biopsy is a low-risk alternative to serial imaging.

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