

CASE IMAGE

Lipid-poor vertebral hemangioma mimicking a vertebral metastasis of cervical carcinoma

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Key Clinical Message

Vertebral hemangiomas are classified into typical and atypical forms. On imaging, atypical forms may look like malignant lesions. The confrontation of data from different imaging modalities (MRI; CT; scintigraphy) facilitates the diagnosis.

KEYWORDS

hemangioma, metastasis, poor-lipid, vertebral

1 | CLINICAL IMAGE DESCRIPTION

A 49-year-old woman has a microinvasive cervical cancer classified as figo 1A, treated by conization. On loco-regional MRI, a nodular lesion of the vertebral body of L3 was found. It appeared hypointense on T1-weighted images, slightly intense on T2-weighted images not suppressed by STIR, and enhanced after injection of gadolinium, suggesting a secondary bony location (Figure 1). Secondary localization in microinvasive stages of cervical cancer being exceptional, confirmation of the metastatic nature led to the performance of a CT scan that showed an osteolytic lesion with marginal sclerosis with a salt-and-pepper appearance consistent with a hemangioma, and on scintigraphy, there was no fixation anomaly pleading for the benignity of the lesion (Figure 2). As there were no signs of malignancy, radiological monitoring was preferred to invasive exploration. This monitoring showed that the lesion remained stable after 2 years.

Vertebral hemangiomas are the most common benign vertebral neoplasms; his incidence is about 10% at

autopsy.¹ They are usually asymptomatic and incidentally detected due to their characteristic features.

Vertebral hemangiomas are classified into typical and atypical forms, according to their composition in lipid, blood, and edema on histology. Typical vertebral hemangiomas appear as T1, T2 hypersignal and suppressed on STIR due to their high lipid content. On CT scan, an osteolytic lesion with marginal sclerosis, containing punctuations with a salt-and-pepper appearance, is seen. On the scintigraphy, no fixation abnormality is found. Atypical forms can pose a problem of differential diagnosis with malignant or metastatic lesions. A distinction is made between aggressive forms that rupture the bone cortices and extend to adjacent tissues, and lipid-poor forms that are T1 isosignal, T2 hypersignal, not suppressed in STIR because of the small lipid contingent, and that enhance after gadolinium injection.² These forms, although less frequent, must be recognized because they pose a problem of differential diagnosis with secondary bone localizations. The use of other imaging modalities, in particular the CT scan, allows the diagnosis to be rectified.

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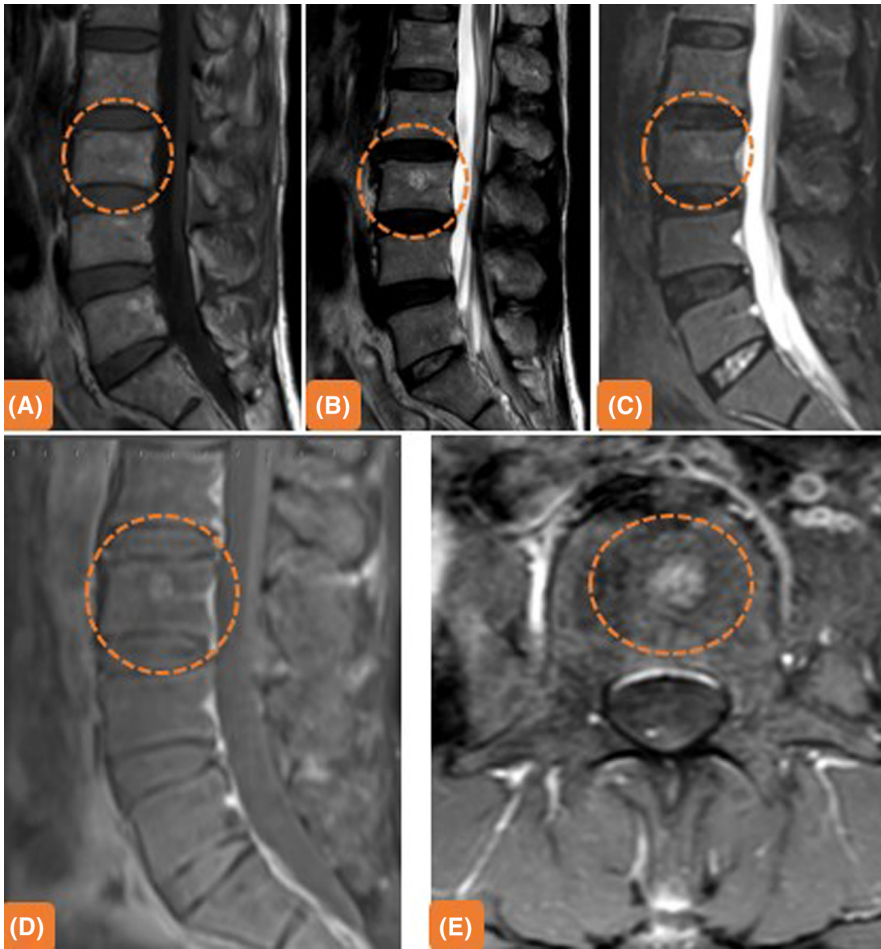


FIGURE 1 Spinal MRI showing a nodular lesion in the vertebral body of L3, hypointense on sagittal T1-weighted slice (A); hyperintense on T2-weighted (B), non-suppressed STIR (C), and enhanced after gadolinium injection (D, E), suggesting a secondary bony location 110×117 mm (96×96 dpi).

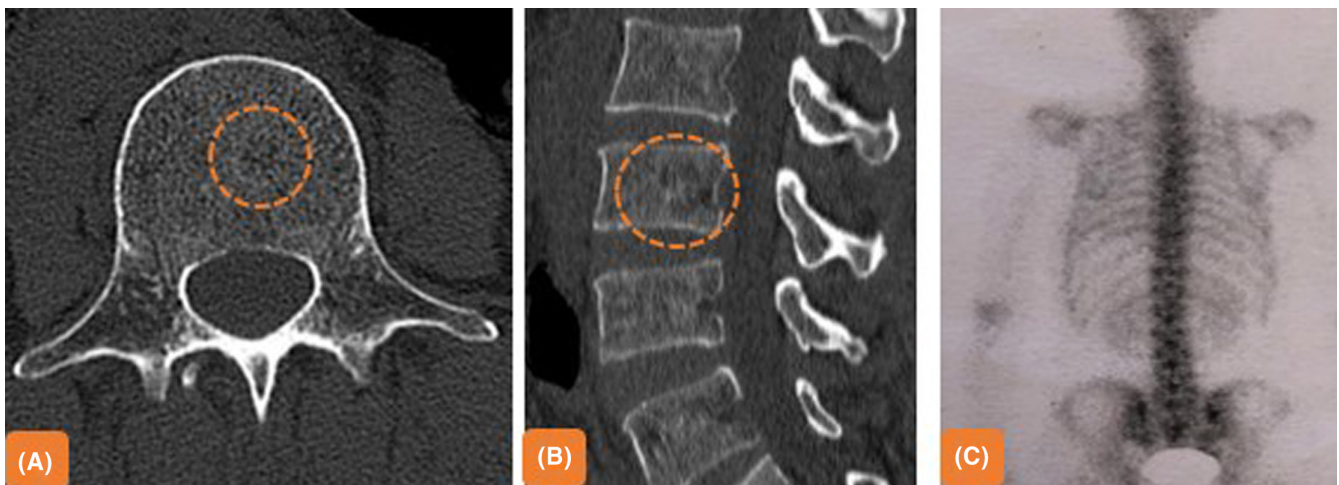


FIGURE 2 Lumbar CT scan in axial section through the vertebral body of L3 (A) and sagittal section (B), showing an osteolytic lesion with marginal sclerosis, containing hyperdense punctations making the salt-and-pepper appearance typical of vertebral hemangioma. The absence of fixation on scintigraphy is noted (C) 150×53 mm (96×96 dpi).

AUTHOR CONTRIBUTIONS

Wend-Yam Mohamed Traore: Conceptualization; data curation; methodology; writing – original draft. **El Mahdi Ait Belhaj:** Writing – original draft. **Bertrand Ghislain**

Compaore: Writing – review and editing. **Firdous Touarsa:** Supervision; validation. **Amal Lahfidi:** Supervision; writing – review and editing. **Mohamed Jiddane:** Supervision; validation; writing – review and editing.

CONFLICT OF INTEREST STATEMENT

The authors declare that they have no conflicts of interest.


DATA AVAILABILITY STATEMENT

The data substantiating this study have been incorporated within the article himself, and can be located in reference 1 and 2.

CONSENT

Written informed consent was obtained from the patient to publish this report in accordance with the journal's patient consent policy.

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