Vertebral hemangioma is a common skeletal angiomatic benign tumor. The one we describe shows an extraordinarily spiculated calcified intra-canalar extension. This gives a “sunburst” appearance to the lesion usually encountered in skull hemangiomas. The aim of this report is to highlight a poorly known sign which, despite its partial aggressive look, should not hinder the assessment of a typical benign hemangioma by the radiologist.

Case report

A 51-year-old patient complaining of chronic neck pain was referred for a cervical spine MRI. Cervical findings were unspecific, but a wide lesion was found at the T5 level, extending from the vertebral body to both pedicles, with a posterior small epidural component that contains some calcifications.

On sagittal T2 weighted images (Fig. 1, 2), the bone marrow of the T5 body was hyperintense compared to the other vertebrae and was not collapsed. The lesion extended posteriorly in the ventral epidural space. The adjacent disks appeared normal. Whereas the vertebral body on T2 weighted images was homogeneously hyperintense, it showed a dual appearance on T1 weighted images (Fig. 3): isthmi and the anterior half body were hyperintense, relating a quiescent fatty marrow, while the posterior vertebral body was hypointense, due to a greater vascular soft tissue component and maybe some inflammatory process. Contrast enhancement (Fig. 4) was mainly seen in the posterior part of the lesion, but also in the components located in the anterior epidural space and in the paravertebral lateral soft tissue. The enhancement also accentuated the mineral structure of the vertebral body presenting a diffuse coarse pattern, with fewer but thicker hypointense trabeculae.

Computed tomography confirmed the thickened pathognomonic bone trabeculations throughout the hemangioma (Fig. 5A), but also showed speculated calcifications at the posterior aspect of the lesion in the anterior epidural space (Fig. 5A,B). This appearance, often described for skull hemangioma, is quite rare in the vertebral ones.

Discussion

The vertebral hemangioma is a well known benign tumor found in 11% among a wide series of autopsy (1, 2). It is also acknowledged that the lesions of the spine are mostly located at the thoracic level (2).

These hemangiomas are asymptomatic, excepted for 1% of them which are invasive. Less than five percent of asymptomatic hemangioma become neurologically relevant (3). The sex ratio is 3:2 favouring female (4).

Key-word: Angioma, skeletal system.

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gation.

CT findings emphasize what can
be seen on plain radiographs (5, 6),
nam ely the honeycomb pattern,
giving the typical ‘jail bar’ aspect on
maximum intensity projection (MIP)
sagittal reconstruction. This results
from the thickening of the vertical
trabeculae. On cross section, the
same phenomenon determinates a
‘polka dot’ pattern (4, 7).

The strom a betw een these
osseous reinforcem ents is either
filled w ith fatty and/or w ith angiom a-
tous tissue, giving respectively a
high or low intensity on T1 w eighted
MR images (8) and a different atten-
uation form on CT images. Laredo et
al. (9) investigated a series of inva-
sive, clinically relevant, hem an-
giomas. They have stated that the
loss of activity (‘aggressiveness’ in
their cases) increases w ith the pre-
dominance of fatty components. It
had been previously observed (2)
that the nature of the active tum oral
part, shows a preponderance of
angiom atous and fibrous tissue,
with only few adipose stroma. This
contributes to the variable intensity
signal level on T1 weighted MR
images, lower in the epidural com-
ponents that contains as a result,
more angiom atous tum oral tissue.
This epidural involvement is limited
by a strong medial fixation of the
posterior longitudinal ligament. The
lesser lateral fixation of this ligament
allows it to be displaced by the
tum oral tissue, resulting on axial
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Conclusion

Vertebral hemangioma is a common lesion often described by many authors. Our report is atypical on many aspects. Our hemangioma shows a dual appearance with inactive and hypervascular, active parts. Furthermore, there is an asymptomatic soft tissue extension in the epidural space. Finally, this extension contains calcifications which are well-described for skull hemangiomas but are very rare at the spine level.

Despite these uncommon features, the well-known radiological semiologic findings including the famous ‘polka dot’ pattern allowed us a formal diagnosis of a benign vertebral hemangioma and avoided unneeded anguish and treatment.

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