Medullar compression secondary to spinal epidural angiolipoma
Published on 23.10.2019

ISSN: 1563-4086
Section: Neuroradiology
Area of Interest: Neuroradiology spine
Procedure: Diagnostic procedure
Imaging Technique: MR
Case Type: Clinical Cases
Authors: Paula Concejo Iglesias, Concepción Ferreiro Argüelles, María Pilar Núñez Valentín, Wilmar Antonio Ocampo Toro, Jaime Hernando Álvarez Cuenca, María Azahara Hoyas García, Iñigo Zubiaurre Telleira, Cristian Rodríguez Robles, Carlos Alberto Bartels Urvina, Juan Miguel Sánchez Bermejo.
Patient: 42 years, male

Clinical History:
A 42-year-old male patient presented with a 2-month history of thoracic pain, weakness and fluctuating motion defects in the lower extremities.
Spine MR showed an extradural thoracic spinal lesion. The patient was submitted to a T6–T8 laminoplasty and an extradural angiolipoma was confirmed pathologically.

Imaging Findings:
A spine MR was performed showing an extradural lesion located in the posterior mid-thoracic region, extending two vertebral body length from T6 to T7 levels. It appeared as a well-defined solid spindle mass moderately hyper-intense on both T1 and T2-weighted images. After gadolinium administration the lesion enhanced intensely and homogeneously. No flow voids were seen but regional vessels were mildly enlarged. On fat suppression images scarce fatty component was depicted. The mass caused moderate expansion of the posterior elements of the bony central canal with normal sized foramina. There were no changes in bone intensity, neither erosion bone to suspect bone origin. The dorsal spinal cord was compressed and ventrally displaced but no myelopathy was confirmed.

Discussion:
Spinal epidural angiolipomas are benign rare tumours, less than 200 cases have been described in the literature [1]. They account for 0.04-1.2 % of all medullar tumours [1-7] and 2-3 % of spinal extradural tumours [1, 2, 4, 5, 6, 7, 8]. They are composed by mature fatty cells, abnormal blood vessels and intraluminal fibrinous micro-thrombi [1, 2, 7, 8].
Spinal epidural angiolipomas are predominantly located in the mid-thoracic region [1, 3, 4, 5, 6, 7] and about 90% in the posterior space [1, 3, 5]. Typically affect adults in the 4º-5º decade with a female preponderance [1, 6, 7, 8]. Although the pathogenesis is still unknown, it is believed that hormonal influence plays a crucial role since these lesions have higher prevalence in peri- or postmenopausal women.
Two types of angiolipomas have been described, infiltrating and non-infiltrating. Non-infiltrating type are more frequent, encapsulated and show benign prognosis [2, 6, 7, 8]. Infiltrating type are rare, non-encapsulated and may invade surrounding tissues [1, 2, 5]. This type is more frequent in the extremities [2, 5] and when they affect the spine are usually anterior to the epidural space [1, 7, 8], intramedullar or intravertebral located [6, 8].

Angiolipomas can be further classified attending to the predominant component so when fatty content is over 50% are labeled as type 1, in type 2 the vascular component is the prevalent one [1, 3].

Clinically, they show progressive symptoms in relation with medullar cord or nerve root compression with sensitive and motor symptoms lower of the lesion level [1, 2, 3, 4, 6, 8].

MR is the imaging modality of choice revealing a solid fusiform lesion attached to dura mater with reduction of the ipsilateral subarachnoid space and displacement of the medullar cord to the opposite side [2]. Depending on the predominance of the tissue components, imaging findings of the lesion varies. Generally speaking, angiolipomas show iso- or hyper-intensity on T1-weighted images and hyper-intensity on T2-weighted images of magnetic resonance imaging and most lesions enhance with gadolinium administration.

The treatment of choice is surgical resection [1, 2, 5, 7, 8].

The role of postoperative radiotherapy is controversial. Some authors support that due to benign nature of this tumor and the good prognosis is not needed [1, 2, 4, 7] although in infiltrating or recurring cases should be considered [6, 8].

Written informed patient consent for publication has been obtained.

**Differential Diagnosis List:** Thoracic spinal epidural angiolipoma with vascular component predominance, Epidural metastases, Lymphoma, Multiple myeloma, Epidural lipomatosis, Hirayama disease, Spinal meningioma

**Final Diagnosis:** Thoracic spinal epidural angiolipoma with vascular component predominance

**References:**


Description: Axial T2-weighted image shows a mildly hyperintense mass that causes moderate expansion of bony canal. There is anterior displacement and compression of spinal cord. Origin: Department of Radiology, Hospital Universitario Severo Ochoa, Leganés, Madrid, 2016.
Figure 2

**Description:** Axial Fat sat-Gd-T1 weighted image shows homogeneous enhancement of the mass.

**Origin:** Department of Radiology, Hospital Universitario Severo Ochoa, Leganés, Madrid, 2016.
Description: Sagittal Fat sat-Gd-T1 weighted image shows homogeneous enhancement of the mass.
Origin: Department of Radiology, Hospital Universitario Severo Ochoa, Leganés, Madrid, 2016.