Spinal epidural angiolipoma

Spinal epidural angiolipoma are rare accounting for approximately 0.14-1.2% of all spinal axis tumors and 2-3% of epidural spinal tumors.

They are benign tumors composed of mature lipocytes admixed with abnormal blood vessels.

Only 129 cases of spinal epidural angiolipomas have been reported in literature till 2012. 171 cases till 2017 [1)]

Spinal angiolipomas are predominantly located in the mid-thoracic region [2)].

Clinical features

The angiolipomas of the spine are rare causes of spinal cord compression that generally induce slow progressive cord compression, but sudden onset or rapid worsening of neurological deterioration is observed in hemorrhagic spinal angiolipoma [3)].

Differential diagnosis

Multiple MRI technology for characterization of SAL provides useful information for differential diagnosis and therapeutic management [4)].

Liu et al. published a spinal epidural angiolipoma with a special pattern of calcification misdiagnosed as meningioma [5)]

Case series

Three cases of epidual spinal angiolipoma from ethnic Han Chinese patients were presented, including one lumbar and two thoracic tumors. MRI imaging findings were reviewed.

Multiple MRI technology for characterization of SAL provides useful information for differential diagnosis and therapeutic management [6)].

Case reports

Spinal epidural angiolipoma with a special pattern of calcification misdiagnosed as meningioma [7)]

A 49-year-old female with obesity presented with a 1-week history of progressively worsening back pain, paresthesia of lower limbs, and gait disturbance. When thoracic magnetic resonance imaging

(MRI) revealed a dorsal epidural mass at the Th5-Th8 level, the patient underwent a laminectomy for gross total excision of the lesion. Both mature fatty tissue and abnormal proliferating vascular elements with thin or expanded walls were observed in the resected tumor. Nonfiltrating spinal angiolipoma was diagnosed and confirmed by pathology. After the operation, sensory loss, numbness, and gait disturbance were improved following the disappearing severe back pain. Following examinations indicated the absence of recurrence within 1 year. The angiolipomas of the spine are rare causes of spinal cord compression that generally induce slow progressive cord compression, but sudden onset or rapid worsening of neurological deterioration is observed in hemorrhagic spinal angiolipoma [8].

Rkhami et al. report the case of a 65 years-old-woman, presenting with complete paraplegia installed since 7 months. Magnetic resonance imaging (MRI) showed an epidural dorsal fatty mass. The patient recovered immediately after surgery. The pathological examination concluded to an angiolipoma.

Angiolipoma patients most commonly have long-lasting pain and then develop progressive neurological symptoms secondary to spinal cord compression. The mean duration of symptom progression at diagnosis is 1 year. MRI is the most reliable examination for the diagnosis of spinal angiolipoma. Total resection is the treatment of choice. No adjuvant treatment is indicated. Since SAL are very haemorrhagic lesions, preoperative embolization is recommended.

They think that spinal cord compression caused by angiolipoma have very good functional prognosis, even if tardily diagnosed [9].

A 56-year-old male who presented with paraparesis and was diagnosed to have D4-5 epidural angiolipoma. Total surgical excision of the epidural angiolipoma was done and his paraparesis gradually improved [10].

Leu et al. presented the MR imaging findings of a pathologically proved infiltrating spinal epidural angiolipoma that appeared largely hypointense on T1-weighted images and enhanced strongly with IV injection of contrast medium, features that suggested a malignant tumor [11].

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