Epidural Hemangioma

By Chih-chun Wu, MD [2]

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Clinical history: A 49-year-old male suffered from mild right hand numbness for several months.
Fig. 3 (T2 Fat-Suppression)
Epidural Hemangioma
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Findings: The cervical MRI showed one well-defined lesion lobular lesion in right side posterior epidural space of C5-6. It was homogenously marked hyperintense on T2-weighted image (T2-WI) and fat-suppression T2WI, hypointense on T1-weighted image (T1-WI), and marginal enhancement post Gadolinium administration.

Diagnosis: An epidural hemangioma (proven by operation and pathology).

Discussion: Cavernous hemangiomas are vascular malformations that constitute 5 percent to 12 percent of spinal vascular lesions. In the spine, hemangiomas located in the epidural space are rare, and most are cavernous. They constitute approximately 4 percent of all epidural tumors and 12 percent of all intraspinal hemangiomas. Clinically, due to the slow growth of this lesion, the most common symptoms are chronic pain, myelopathy, and radiculopathy. But acute onset sensory deficit cause by hemorrhage was also been reported.

MR findings: The most common MR features solid hypervascular masses with lobular contour. A rim of low T2 signal intensity is relatively common; high signal intensity on T2-WI (cystic like).

J.W. Lee, et. al., categorized the MR imaging patterns of spinal hemangiomas into four types: type A for a cyst like mass with T1 hyperintensity, type B for a cyst like mass with T1 isointensity, type C for a solid hypervascular mass, and type D for an epidural hematoma. The anterior epidural space of the lumbar spine was a common location of types A and B, whereas the posterior epidural space of the thoracic or cervical spine were common in types C and D. Types A and B showed almost single-segment spinal involvement, while all cases from types C and D showed multisegmental spinal involvement.

Differential diagnosis: herniated disks, synovial cysts, granulomatous infections, neurogenic tumors, lymphomas, meningiomas, angiolipoma, pure epidural hematoma, and epidural extramedullary hematopoiesis depending on the MR types.

Diagnostic clues: Herniated disks or granulomatous infections frequently have a thick and irregular rim, while hemangioma usually has a smooth and relatively thin rim. A rim of low signal intensity may also favor an epidural hemangioma to a neurogenic tumor. Neural foraminal widening was reported to in cases of hemangiomas, and was probably a less helpful feature in the differential diagnosis with neurogenic tumors. Spinal angiolipoma is a rare form of epidural tumor showed T1 hyperintensity while solid type hemagnioma usually does not. Lymphomas or meningiomas frequently show isointense signal intensity on T2-WI, while spinal epidural hemangiomas usually
Epidural Hemangioma

reveal high signal intensity on T2-WI.

References:

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Disclosures:

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