

# Spinal Vascular Malformation Diagnosis

## Spinal angiography

see [Spinal Angiography for Spinal Vascular Malformation](#).

## MRI

MRI detects some SVMs with greater sensitivity and safety than angiography,<sup>19</sup> but is inadequate for treatment planning. 82% show extramedullary flow voids. Variable degree of cord enhancement (from venous congestion or venous infarction). Negative MRI does not rule out diagnosis. Myelography: classically shows serpiginous intradural filling defects. Generally superseded by MRI. If done, the patient should be imaged prone and supine (to avoid missing a dorsal AVM) ✕ Risk of bleeding from puncture of a dilated artery/vein with myelography needle.

Contrast-enhanced MR angiography ([MRA](#)) has been increasingly used in the evaluation of spinal vascular malformations. Even though MR spinal angiography has several advantages over catheter [spinal angiography](#) (DSA), however, spinal DSA must never be omitted before operation, even if the vascular malformation is nicely demonstrated by MR angiography.

Sharma et al. report a case of spinal vascular malformation in which MR angiography provided great images which almost convinced everyone about the type and site of malformation/fistula. The images were so convincing that it was almost decided to skip catheter based angiography, citing reason of disadvantages of catheter based angiography over MR angiography. However, spinal DSA was luckily done which completely changed the type and site of malformation and helped in avoiding failed surgery. They conclude that even though catheter based spinal angiography has disadvantages over MRA, it should never be omitted from the diagnostic protocol <sup>1)</sup>.

<sup>1)</sup>

Sharma AK, Westesson PL. Preoperative evaluation of spinal vascular malformation by MR angiography: how reliable is the technique: case report and review of literature. Clin Neurol Neurosurg. 2008 May;110(5):521-4. doi: 10.1016/j.clineuro.2008.02.005. Epub 2008 Mar 21. Review. PubMed PMID: 18358597.

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Last update: **2024/06/07 03:00**

