

The purpose of this study was to determine the added value of the perimedullary spinal vein enlargement sign on magnetic resonance imaging (MRI) in distinguishing intradural-extramedullary tumors (IDEMTs) from intramedullary spinal tumors (IMTs).

Methods: Two hundred and eight consecutive spinal intradural tumors with histopathologic confirmation (21 IMTs, 187 IDEMTs) were enrolled. Two readers blinded to the final pathological diagnosis and clinical data independently assessed the venous enlargement sign to determine the agreement between them and jointly distinguished IDEMTs from IMTs according to the common MRI findings. Sensitivity, specificity, and accuracy for the diagnosis of IDEMTs were calculated for the common MRI findings, vein enlargement sign, and a combination of both.

Results: Intraobserver agreement and interobserver agreement for both readers was excellent. The sensitivity, specificity, and accuracy of common MRI findings for differentiating IDEMTs from IMTs were 83.4, 95.2, and 89.3 %, respectively. Thirty-one IDEMTs were mistakenly diagnosed as IMTs, in which seven were cases with vein enlargement signs. By applying the vein enlargement sign to the common MRI findings, the specificity remained at 95.2 %, while the sensitivity improved to 89.3 % and the accuracy increased to 92.3 %.

Conclusion: The spinal perimedullary vein enlargement sign is useful in assessing intradural tumors and to differentiate IDEMTs from IMTs ¹⁾.

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Gong T, Liu Y, Wang G, Yang L, Chen W, Gao F, Chen X. Spinal perimedullary vein enlargement sign: an added value for the differentiation between intradural-extramedullary and intramedullary tumors on magnetic resonance imaging. *Neuroradiology*. 2016 Nov;58(11):1117-1124. doi: 10.1007/s00234-016-1744-4. Epub 2016 Sep 5. PMID: 27596484.

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