

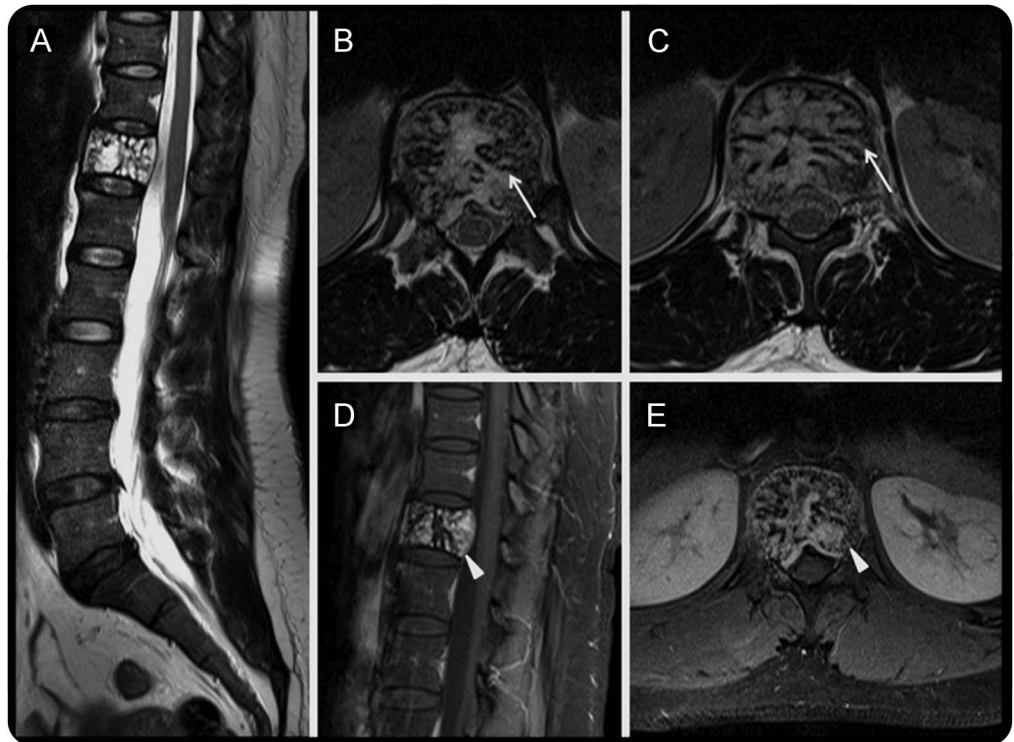
Teaching NeuroImages: “Mini brain” sign

A radiologic marker for vertebral solitary plasmacytoma

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Figure 1 Spine MRI disclosing the “mini brain” sign



(A) Sagittal T2-weighted lumbosacral MRI discloses a lytic lesion involving the T12 vertebral body with posterior vertebral wall bulging. (B, C) Axial T2-weighted images of the T12 vertebral body highlight the cortical and radiated pattern (“mini brain” sign—arrows). (D, E) Postcontrast T1-weighted fat-saturated images show heterogeneous enhancement (arrowhead).

A 41-year-old woman presented with refractory low back pain for the last 6 months. Neurologic examination was normal. Blood tests showed high erythrocyte sedimentation rate. A spine MRI (figure 1) disclosed involvement of the T12 vertebral body. There was hyperintense signal in T2-weighted sequence and multiple linear hypointense areas with cortical and radiated pattern resembling the brain parenchyma (the “mini brain” sign) (figure 2). Biopsy confirmed solitary plasmacytoma.

Mini brain sign represents cortical thickening and is most likely caused by lytic lesions.¹ The thickened

struts resemble sulci in the brain, leading to a small brain appearance.^{2,3} A “spoke-wheel” pattern has also been described. Mini brain sign is considered highly specific for solitary plasmacytoma.¹

AUTHOR CONTRIBUTIONS

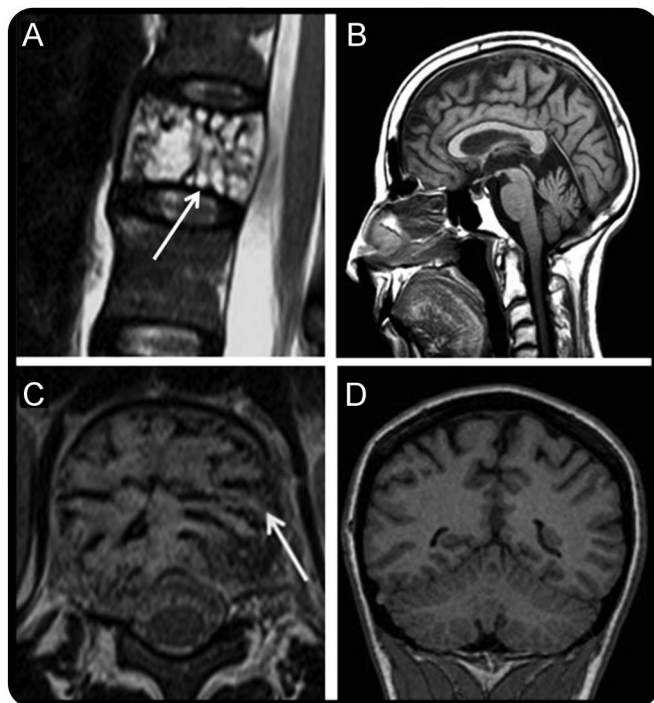
Dr. Ferreira-Filho: conception of the project, organization of the project, execution of the project, writing of the first manuscript draft, review and critique of the manuscript. Dr. Pedroso: conception of the project, organization of the project, execution of the project, review and critique of the manuscript. Dr. Sato: conception of the project, organization of the project, execution of the project, writing of the first manuscript draft. Dr. Yared: conception of the project, organization of the project, execution of the project, writing of the first manuscript draft, review and

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Figure 2 The mini brain sign resembles the sulci in the brain, leading to a small brain appearance



Sagittal spine enlarged imaging discloses the “mini brain” sign (A). Note that the mini brain sign resembles the sulci in the brain, leading to a small brain appearance (B). Axial spine MRI shows the mini brain sign (C) resembling a coronal T1-weighted sequence brain MRI (D).

critique of the manuscript. Dr. Barsottini: conception of the project, organization of the project, execution of the project, writing of the first manuscript draft, review and critique of the manuscript. Dr. Oliveira: review and critique of the manuscript. Dr. Diniz-Ferreira: conception of the project, organization of the project, execution of the project, writing of the first manuscript draft, review and critique of the manuscript.

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