

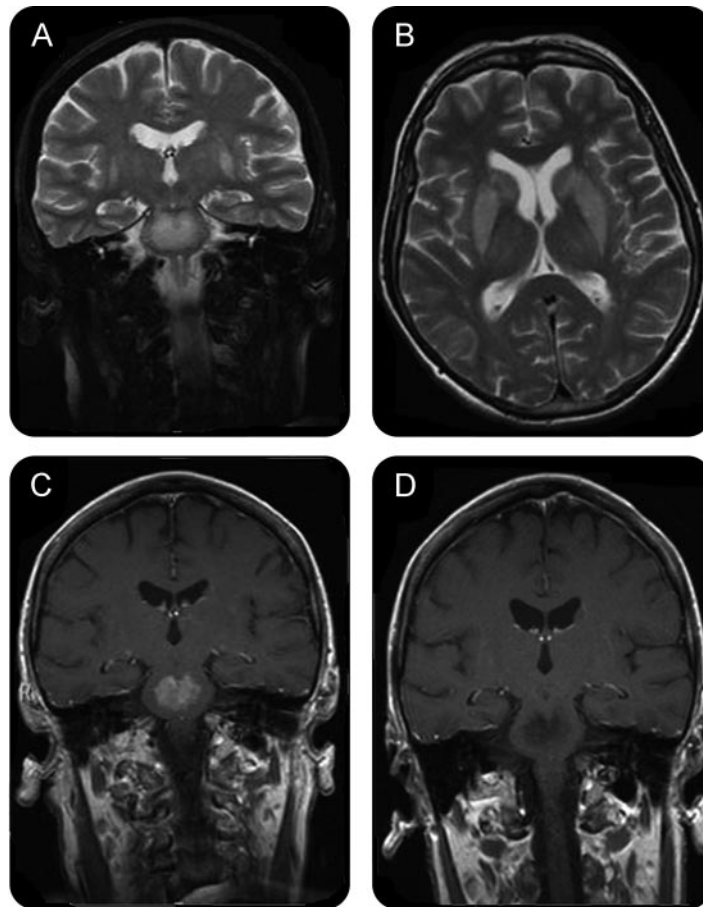
Teaching NeuroImages: Neuroradiologic findings in pontine and extrapontine myelinolysis

Clue for the pathogenesis?

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Figure Contrast enhancement on MRI in the early phase of central pontine myelinolysis



Three days after symptom onset, T2-weighted MRI showed a hyperintense lesion of the pons (A) and of the basal ganglia (B). Coronal postgadolinium T1-weighted MRI showed a nonhomogeneous enhancement of the pontine lesion 3 days after symptom onset (C), which diminished 15 days later (D).

A 58-year-old woman presented with subacute onset of tetraparesis, anarthria, and dysphagia after rapid correction of hyponatremia caused by repeated vomiting. Brain MRI showed pontine and extrapontine lesions typical for the osmotic demyelination syndrome (figure, A and B). The pontine lesion showed nonhomogeneous contrast enhancement (figure, C), which diminished after 15 days (figure, D). Based on

the MRI findings of enhancement, IV methylprednisolone was started, and there was improvement of her clinical condition.¹ Besides the typical MRI abnormalities, our patient showed pontine contrast enhancement, which is uncommon² and may suggest an inflammatory mechanism or breakdown of the blood-brain barrier due to specific vulnerability of endothelium in the acute phase of the disease.

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AUTHOR CONTRIBUTIONS

Dr. Juergenson: conception of the study; writing of the first draft. Dr. Zappini: conception of the study; writing of the first draft. Dr. Fiaschi: review and critique. Dr. Tonin: review and critique. Dr. Bonetti: conception of the study; review and critique.

DISCLOSURE

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REFERENCES

1. Martin RJ. Central pontine and extrapontine myelinolysis: the osmotic demyelination syndromes. *J Neurol Neurosurg Psychiatry* 2004;75(suppl III):iii22–iii28.
2. Sharma P, Eesa M, Scott JN. Toxic and acquired metabolic encephalopathies: MRI Appearance. *AJR Am J Roentgenol* 2009;193:879–886.

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