MRI in acute Wernicke's encephalopathy

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A 26-year-old woman presented with a 4-day history of progressive lateral ophthalmoplegia, inability to stand, gait ataxia, apathy, and confusion after 3 months of intractable postgastroplasty hyperemesis.¹ The diagnosis of acute Wernicke encephalopathy was consistent with characteristic changes seen on her admission MRI (figure 1, A and B).² Three hours after initiating thiamine, her lateral gaze returned, Romberg test was negative, and cognition improved dramatically. Her clinical improvement was correlated with normalization of hyperintense T2 MRI signals 5 days later (figure 1, C and D). This dramatic turnaround underscores the necessity of thiamine in acute Wernicke encephalopathy.

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Figure. Rapid clearing of MRI signals in Wernicke encephalopathy. T2-weighted MR images at the time of admission show abnormal hyperintense signal (arrows) in the periaqueductal gray region (A, axial view) and dorso-medial thalami (B, coronal view), which cleared after 5 days of thiamine (100 mg IV) treatment (C, D).

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