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 postgastropasty hyperemesis. The diagnosis of acute Wernicke encephalopathy was consistent with characteristic changes seen on her admission MRI (figure 1, A and B). 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 dorsomedial thalami (B, coronal view), which cleared after 5 days of thiamine (100 mg IV) treatment (C, D).
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