

## An alcoholic with gait ataxia and global confusion

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**Keywords:** magnetic resonance imaging, thiamine, Wernicke's encephalopathy

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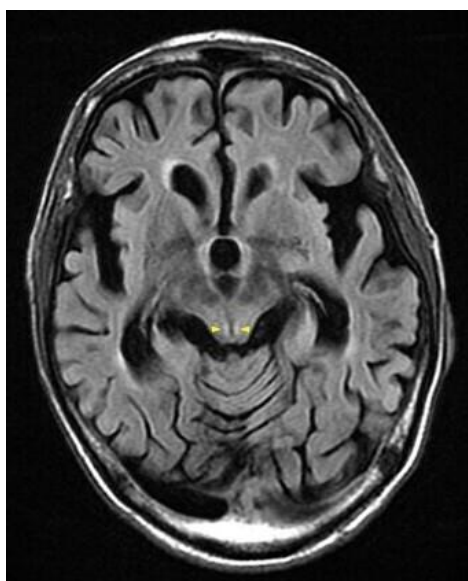
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Dear Editor,

A 64-year-old man with alcoholism presented to the emergency department with a 7-month history of progressively worsening gait ataxia and global confusion. His wife reported his long-term intake of ethanol at a high level (greater than 200 g of pure ethanol per day). He had taken no medication. He was afebrile and had normal blood pressure. The blood vitamin B1 (thiamine) level was 12 ng/mL (reference range, 24 to 66), and the blood ammonia level was 24 µg/dL (reference range, 12 to 66). Brain magnetic resonance imaging (MRI) was performed. Fluid-attenuated inversion recovery sequences showed symmetrical signal abnormality around the aqueduct (**Figure 1**).



**Figure 1.** Fluid-attenuated inversion recovery sequences showing symmetrical signal abnormality around the aqueduct (arrowheads) (reprinted with permission of the patient's family)

A diagnosis of Wernicke's encephalopathy was made by the characteristic periventricular lesions. Although high-dose thiamine therapy was initiated, his mental status never normalized. Furthermore, a slow and wide-based gait was left. Long-term excessive intake of alcohol may cause irreversible damage to the brain.

Wernicke's encephalopathy is a neuropsychiatric syndrome due to thiamine deficiency. The classic triad is ophthalmoplegia, ataxia, and global confusion; however, only one-third of patients with acute Wernicke's encephalopathy present with the clinical triad [1]. The present case lacked ophthalmoplegia. The predisposing factors or conditions include alcohol use disorder, malnutrition due to hyperemesis, starvation, renal dialysis, cancer, acquired immunodeficiency syndrome, and gastric surgery [1]. On brain MRI, periventricular lesions surround the third ventricle, aqueduct, and fourth ventricle, with petechial hemorrhages in occasional acute cases and atrophy of the mamillary bodies in most chronic cases [1]. There is frequently endothelial proliferation, demyelination, and some neuronal loss [1]. The European Federation of Neurological Societies guidelines suggest that MRI should be used to support diagnosis of Wernicke's encephalopathy [2].

Wernicke's encephalopathy is a medical emergency and requires immediate administration of thiamine. However, approximately half of patients incompletely recover from ataxia [1]. As apathy, drowsiness, and confusion recede, an amnestic state with impairment in recent

Received: 09.03.2023,

Accepted: 06.05.2023

<https://doi.org/10.29333/jcei/13636>

memory and learning (i.e., Korsakoff's psychosis) may become apparent [1].

**Funding:** No funding source is reported for this study.

**Ethical statement:** The author stated that as this study is a clinical case report, no ethics committee approval was required. Written informed consent was obtained from the patient's family for submission of case reports and clinical pictures for potential publication.

**Declaration of interest:** No conflict of interest is declared by the author.

**Data sharing statement:** Data supporting the findings and conclusions are available upon request from the author.

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