Wernicke-Like Encephalopathy Associated With Ifosfamide

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Keywords

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A 73-year-old female with maxillary chondroblastic sarcoma, chronic kidney disease, and undernutrition presented with ataxia, myoclonus, and confusion 1 week after ifosfamide and etoposide. Three days later, she became obtunded.

Magnetic resonance imaging of the brain revealed abnormalities in the bilateral thalami (Figure 1) and mammillary bodies (Figure 2), suggestive of thiamine deficiency. Treatment dose of intravenous thiamine was administered, and her neurologic status normalized within 24 hours.

Ifosfamide rarely causes a Wernicke-like encephalopathy, particularly in patients with sarcoma, elevated creatinine, and hypoalbuminemia.¹ Toxicity is likely mediated through its metabolite Chloroacetaldehyde, which may impair thiamine function, and is treated with methylene blue or thiamine.²

Figure 1. Axial fluid-attenuated inversion recovery (FLAIR) magnetic resonance (MR) image demonstrates increased signal intensity involving the thalami, bilaterally (arrows).

Figure 2. Axial fluid-attenuated inversion recovery (FLAIR) magnetic resonance (MR) image demonstrates increased signal intensity in the mammillary bodies, bilaterally (arrows).

Author's Note

John Kent Lin, Daniel Chow, Leslie Sheu, and Bhavya Rehni contributed to drafting or revising the manuscript for intellectual content. Bhavya Rehani is the corresponding author, principal author, and guarantor.

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