

Changing vertical nystagmus in the opposite direction: is the transition from upbeat to downbeat nystagmus a diagnostic clue for Wernicke's Encephalopathy?

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Background: Changes of vertical nystagmus in the opposite direction are very rarely reported. This study aimed to report an unusual case of Wernicke's encephalopathy (WE) presenting with a transition from upbeat nystagmus (UN) to downbeat nystagmus (DN) and to investigate the clinical pattern of changing vertical nystagmus in the opposite direction reported in the literature. Methods: We present a WE patient with primary position UN that changed to DN with an upward or horizontal lateral gaze. Additionally, we review previously reported cases and analyze the clinical patterns of changing vertical nystagmus in the opposite direction. Results: Among 10 cases, including our case, the most common type of changing vertical nystagmus in the opposite direction was a transition from UN to DN (n=9, 90%). The most common diagnosis was WE, which is accompanied by changes in vertical nystagmus from UN to DN (n=6, 60%). The most commonly associated neuro-radiological localizations for the changing of vertical nystagmus were the brainstem and the cerebellum. Conclusions: The results of this clinical investigation may provide support for the diagnosis of WE. In addition, if young or middle-aged patients exhibit transitions from UN to DN with brainstem or cerebellar signs, a diagnosis of WE should be considered. Furthermore, clonazepam and thiamine might be helpful for improving nystagmus symptoms.