



## Case report

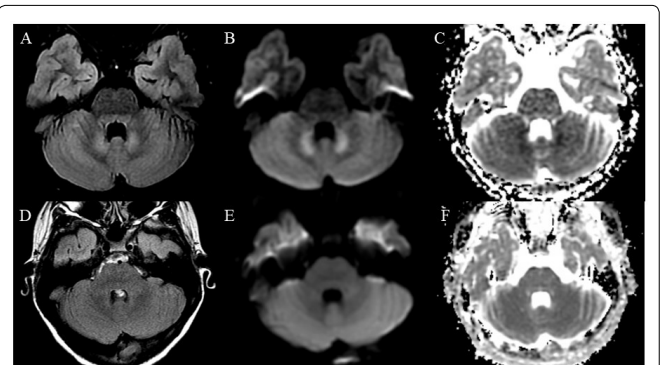
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# Reversible Signal Abnormalities in Bilateral Dentate Nuclei Secondary to Isoniazid Neurotoxicity

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## Case

An 11-year-old Colombian female on isoniazid for recently diagnosed latent tuberculosis presented to the emergency department after a first-time, generalized tonic-clonic seizure. She exhibited mild bilateral hypometria on finger-to-nose testing, lower limb ataxia on heel-to-shin testing, and dysmetria on rhythmic finger tapping. MRI brain revealed symmetric T2/FLAIR hyper intensities with diffusion restriction and apparent diffusion coefficient correlate in bilateral dentate nuclei (Figure 1A, Figure 1B, Figure 1C). It was discovered that the patient had mistakenly taken twice the prescribed dose of isoniazid for two weeks prior to presentation. Eighteen days after cessation of isoniazid, her exam returned to baseline, and MRI demonstrated resolution of the abovementioned signal changes (Figure 1D, Figure 1E, Figure 1F). Seizure, abnormal cerebellar exam, and bilateral dentate nuclei lesions on MRI may reflect reversible manifestations of supratherapeutic isoniazid [1].



**Figure 1:** A) Brain MRI showing bilateral dentate T2/FLAIR hyper intensities; B) with increased diffusion restriction; C) and apparent diffusion coefficient correlate; D). Follow up brain MRI eighteen days after cessation of isoniazid showed resolution of these signal changes on the same T2/FLAIR; E) DWI; F) and ADC sequences.

## References

1. Senthil Raj Kumar S, Shanmuga Jayanthan S, Rupesh G (2020) Isoniazid: A rare drug-induced cause for bilateral dentate nuclei hyperintensity. *Indian J Radiol Imaging* 30: 218-221.

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