

# Drug-induced changes in dentate nuclei of cerebellum

Sir,

We read with great interest the article titled "Sequential MR imaging (with diffusion-weighted imaging) changes in metronidazole-induced encephalopathy" by Singh *et al.* in the April–June 2017 issue of the Indian Journal of Radiology and Imaging.<sup>[1]</sup> The article is highly informative and describes signal changes in splenium and dentate nuclei following metronidazole ingestion. In this article, we describe a few drugs that cause similar signal changes in the cerebellar dentate nuclei [Table 1]:

Thus, we see that the dentate nuclei can be affected by many drugs with nonspecific magnetic resonance imaging findings. Hence, integration of clinical data is crucial for definitive diagnosis.

**Table 1: Drugs that cause signal change in dentate nuclei**

Drug	Use	Area of brain affected	T2/FLAIR hyperintense	Resolution upon discontinuation of drug
A <sup>[1,2]</sup> Metronidazole	Antibiotic, amebicide, antiprotozoal agent	Dentate nuclei, midbrain, inferior colliculus, dorsal pons and medulla, inferior olivary nucleus, splenium	Yes, shows diffusion restriction	Yes
B <sup>[2]</sup> Monohalothane	Fumigative pesticide	Dentate nuclei, periaqueductal region of midbrain, inferior colliculus, splenium, globus pallidus, thalamus, lower cranial nerve nuclei	Yes, no diffusion restriction	Yes
C <sup>[3]</sup> Isoniazid	First line antitubercular therapy	Dentate nuclei	Yes, may show diffusion restriction	Yes
D <sup>[2,4]</sup> Cycloserine	Second line antitubercular therapy	Dentate nuclei	Yes, shows diffusion restriction	Yes

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## Conflicts of interest

There are no conflicts of interest.

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