# Ornidazole-Induced Ataxia and Encephalopathy in an Indian Woman: A Case Report

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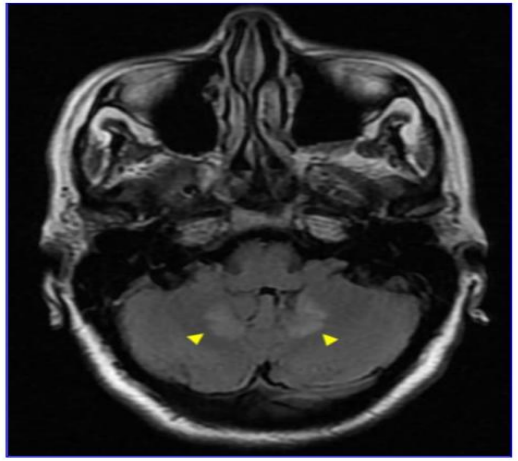
## INTRODUCTION

Nitroimidazole derivatives such as metronidazole, tinidazole, and ornidazole are frequently used for treating protozoal and anaerobic bacterial infections. Though gastrointestinal side effects are common, neurological complications such as cerebellar ataxia and encephalopathy are rare. Ornidazole, due to its longer half-life, poses a risk of neurotoxicity when used for extended durations.

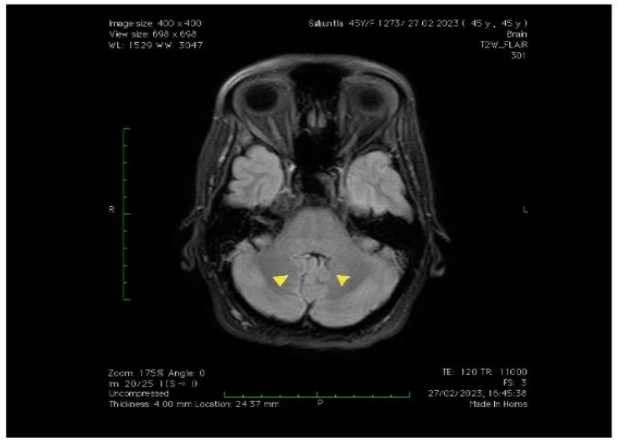
# CASE REPORT

A 44-year-old woman presented with a one-month history of difficulty in walking with resting tremor. Neurological examination revealed dysarthria, dysdiadochokinesia, gait ataxia and abnormal behaviour like irrelevant talks. There was no cranial nerve involvement or reflex abnormality. Routine labs and systemic evaluations were unremarkable. Brain MRI revealed symmetrical T2/FLAIR hyperintensities in the bilateral dentate nuclei, suggesting drug-induced encephalopathy. On detailed history, the patient was found to be self-medicating with ornidazole for four months.

MRI Images: First visit MRI showed dentate nucleus hyperintensities; follow-up MRI after 15 days showed complete resolution.



MRI of the patient during his first time in the hospital, showing characteristics hyperintnse signal in bilateral dentate nuclei.



T2W_ FLAIR image showing resolution of the hyperintense signal in bilateral dentate nuclei 15 days later.

Ornidazole was discontinued immediately. She was treated with supportive care, Trihexyphenidyl 2 mg, and physiotherapy. Significant clinical improvement was observed within 7 days. A follow-up MRI after 15 days showed complete resolution of cerebellar lesions

## DISCUSSION

This case illustrates a rare but reversible neurotoxic effect of prolonged ornidazole use. The dentate nucleus—implicated in cerebellar control of movement and tremor regulation—was prominently involved.Previous literature reports metronidazole-related MRI changes in dentate nuclei, midbrain, pons, corpus callosum, and basal ganglia. Similar findings are now seen with ornidazole toxicity. These changes are typically reversible upon drug cessation, and the recovery timeline can vary.

## CONCLUSION

Ornidazole can cause reversible cerebellar toxicity, including ataxia and encephalopathy, especially when used for prolonged periods.MRI findings, particularly dentate nucleus hyperintensities, play a crucial role in diagnosis and follow-up. Early recognition and prompt cessation of the drug are vital to avoid irreversible neurological damage. This case emphasizes the importance of drug history in unexplained cerebellar syndromes.