Metronidazole-induced Encephalopathy

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A 67-year-old woman with liver cirrhosis was treated with metronidazole (1.5 g daily) for Clostridium difficile-associated diarrhea. She developed dysarthria and gait disturbance 27 days after the initiation of treatment. A neurological examination revealed ataxia, hypotonus and diminished tendon reflexes in the limbs. Asterixis was absent. Electroencephalography showed an 8-Hz background α-rhythm with a small number of θ bursts. Brain magnetic resonance imaging (MRI) revealed lesions in the cerebellar dentate nuclei (Picture A-C) and the splenium of the corpus callosum (Picture E-G). Her ataxic symptoms resolved four days after the discontinuation of metronidazole. Follow-up MRI performed two weeks later confirmed improvement of the dentate lesions (Picture D), although the splenial lesion persisted for two months after onset (Picture H). Metronidazole-induced encephalopathy is a rare toxic encephalopathy with a characteristic lesion distribution (1). Physicians should therefore be aware that metronidazole can cause encephalopathy at low cumulative doses, especially in patients with hepatic dysfunction (2).

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