

MR features of metronidazole-induced encephalopathy

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DESCRIPTION

Metronidazole, a commonly used antimicrobial drug, is rarely known to cause encephalopathy irrespective of dose and duration of intake. It poses a diagnostic challenge clinically because of its rarity. MR is an important adjunct in diagnosing this condition because of characteristic features on it.¹ In the previous case reports, typical brain lesions have been described in the cerebellar dentate nucleus, midbrain, dorsal pons, medulla and splenium of the corpus callosum. MR is also useful in follow-up, since most of the lesions are reversible and correspond to the areas of vasogenic oedema on diffusion-weighted imaging (DWI), though few of them may represent cytotoxic oedema.²

Here, We describe MRI features of metronidazole-induced encephalopathy in our case report. A 48-year-old woman was taking tab metronidazole (800 mg three time a day) for amoebic liver abscess and presented with dizziness, headache and altered behaviour. MRI revealed symmetric areas of T2-weighted and fluid-attenuated inversion recovery

hyperintensity involving bilateral dentate nuclei and deep cerebellar white matter (white arrow in figure 1A, C, D) and bilateral superior olivary nuclei in dorsal pons (white arrow in figure 1B). The corresponding areas appeared hypointense on T1-weighted imaging (white arrow in figure 1E). No evidence of restricted diffusion was seen on DWI and apparent diffusion coefficient map (figure 1F, G). On discontinuation of the drug, patient's clinical symptoms improved remarkably.

Learning points

- ▶ Radiologists should be aware of the imaging features of metronidazole-induced encephalopathy because although rare; it is a reversible condition with good prognosis and metronidazole is prescribed so often.
- ▶ MRI is helpful in making the diagnosis because of characteristic findings.

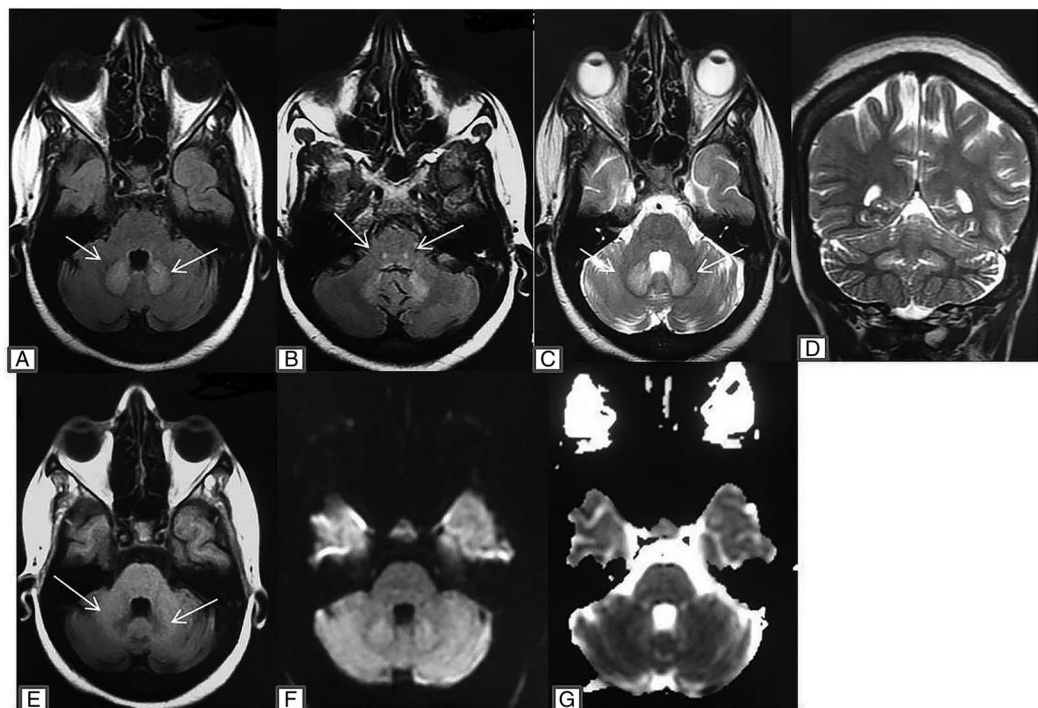


Figure 1 MRI reveals symmetric area of T2-weighted imaging and fluid-attenuated inversion recovery hyperintensity involving bilateral dentate nuclei and deep cerebellar white matter (white arrow in A and C and D) and bilateral superior olivary nuclei in dorsal pons (white arrow in B). The corresponding areas appearing hypointense on T1-weighted imaging (white arrow in E). No evidence of restricted diffusion seen on diffusion-weighted imaging and apparent diffusion coefficient map (F and G).



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