Tumefactive demyelinating lesion

Figure MRI

T2-weighted axial section (A) and T1-weighted post gadolinium contrast sagittal (B) and coronal (C) sections display characteristic features of a tumefactive plaque including a T2-hypointense rim¹ and an open-ring pattern of contrast enhancement.² Fluid attenuated inversion recovery coronal section (D) shows the additional white matter lesions in the left temporal lobe and pons supporting the diagnosis of multiple sclerosis.

A previously healthy 31-year-old woman presented with a 2-week history of progressive left hemiparesis. MRI (figure) demonstrated a 3 cm enhancing mass in the right posterior frontal white matter with several smaller lesions in the white matter of the contralateral hemisphere and brainstem (figure, D). A stereotactic biopsy of the large lesion was performed to establish the diagnosis. This showed no evidence of neoplasia but revealed demyelinated neurones with axonal sparing and an infiltrate of foamy macrophages and perivascular lymphocytes—typical histological features of a multiple sclerosis plaque. The patient was treated with corticosteroids and her symptoms rapidly improved.

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