Voltage-gated Potassium Channel Antibody-associated Encephalitis with Claustrum Lesions

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A 65-year-old woman presenting with an acute onset of consciousness disturbance was referred to our emergency department. During the examination, she was comatose and had clonic seizures. Her brain MRI showed symmetric abnormal signal intensities localized in the bilateral medial temporal lobes and claustrum (Picture). The serum anti-voltage-gated potassium channel (VGKC) antibody was elevated (1,207 pM; normal range <100 pM). Her symptoms and MRI abnormalities improved after corticosteroid therapy, but memory loss persisted. In most cases of VGKC antibody-associated encephalitis, the MRI shows abnormal signal intensities in the bilateral/unilateral medial temporal lobes or no significant abnormalities. MRI abnormalities in the bilateral claustrum have rarely been reported in encephalitis whereas some cases involve the claustrum symmetrically (1, 2). Although the functions of the claustrum and signs of damage to this area remain unclear, symmetric claustrum lesions (1, 2), in addition to medial temporal lobe lesions, are suggestive of immune-mediated encephalitis, as seen in our patient.

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References