An unusual case of anti-basal ganglia encephalitis mimicking Guillain-Barré Syndrome

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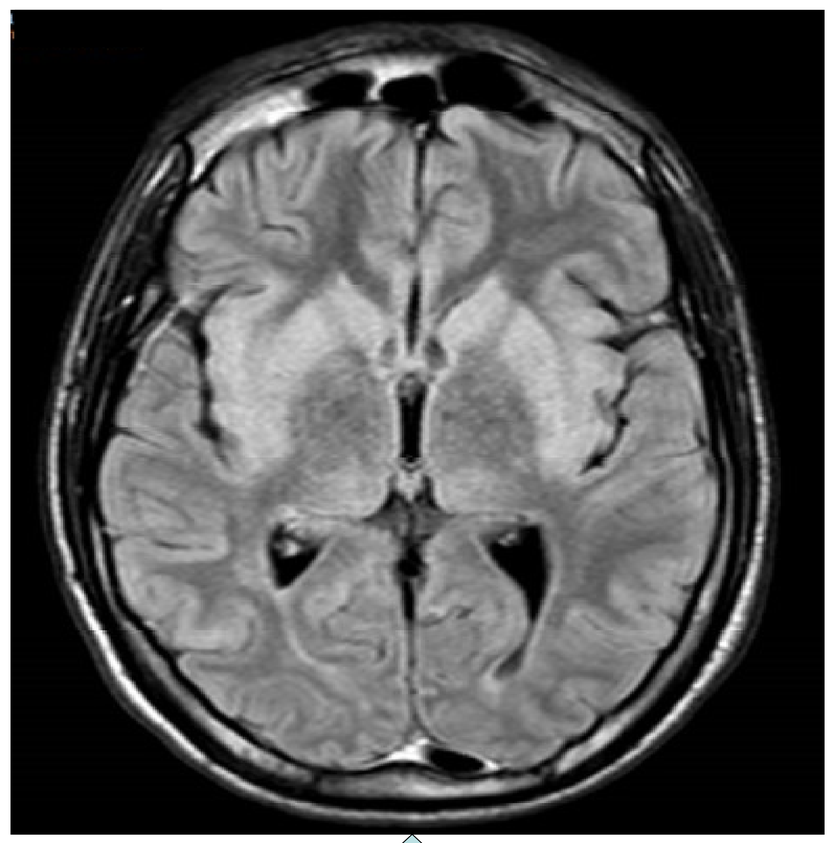
Background:

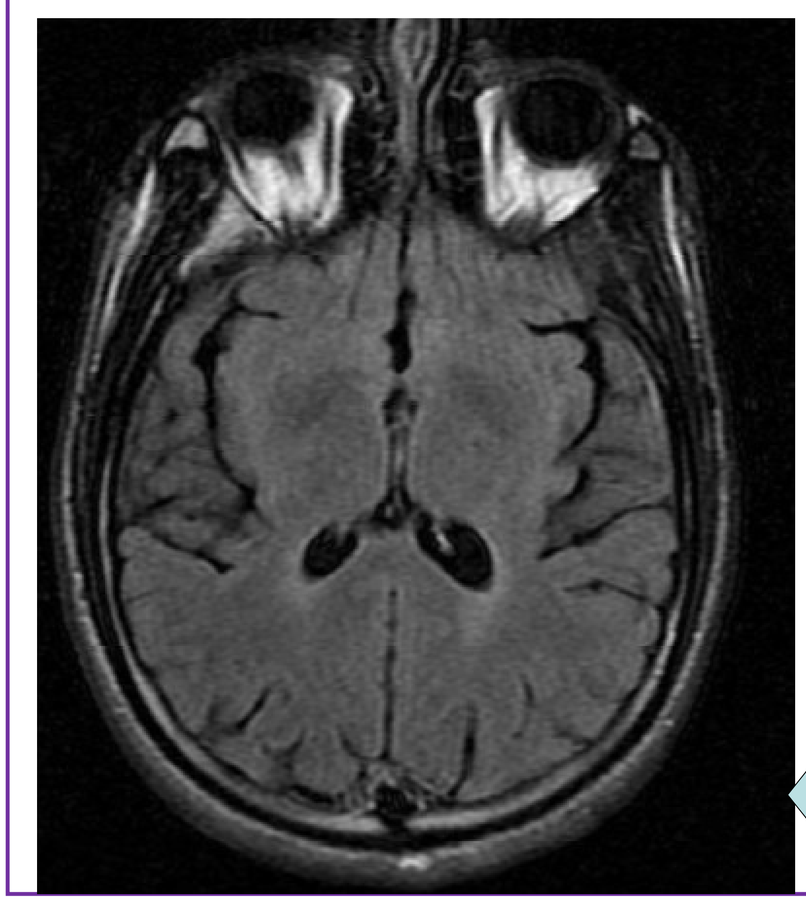
Anti-basal ganglia antibodies have been associated with autoimmune encephalitis. Guillain-Barré-like symptoms have not been previously described.

Case report:

A 18-year-old patient was in good health until 2 weeks before admission to our hospital, when he developed worsening headache, fever, asthenia. The patient's symptoms worsened with slowing of mentation, and acute onset of upper and lower limb weakness associated with hyporeflexia.

On admission:
- *Brain MRI was normal.*
- *The cerebrospinal fluid (CSF) analysis showed a leukocyte count of 86/mmc, with a lymphocytic predominance (88%), and protein elevation (91 mg/dL) but no cytoalbuminologic dissociation. PCR of CSF for neurotropic viruses was negative. Bacterial as well as fungal cultures of the CSF were negative.*
- *Electroencephalogram (EEG) revealed generalized slowing.*
- *Electromyography (EMG) examination was normal.*





In the following days, the patient's symptoms worsened with bradykinesia, global aphasia and increasing lower limb weakness with areflexia.
- *A repeat **brain MRI showed bilateral high signal lesions on T2 imaging in the basal ganglia and thalamus**, consistent with autoimmune encephalitis.*
- *A repeat EMG showed **mild slowing of F waves** in the lower limbs.*

Empirically, high-dose corticosteroids were started without benefit.
*The patient was treated with a trial **of intravenous immunoglobulin** over 5 days with progressive improvement.*
*After discharge, laboratory screening disclosed **anti-basal ganglia antibodies**.*

At 5-month follow-up he had returned fully back to normal.
In addition, brain MRI was performed, which showed complete regression of the lesions.

Conclusions:

Historical descriptions of anti-basal ganglia encephalitis include sleep disorder (somnolence, sleep inversion or insomnia), lethargy, parkinsonism, dyskinesias and neuropsychiatric symptoms. This is the first report of anti-basal ganglia encephalitis associated with Guillain-Barré-like symptoms.

Reference

Dale RC, Church AJ, Surtees RA, Lees AJ, Adcock JE, Harding B, Neville BG, Giovannoni G. Encephalitis lethargica syndrome: 20 new cases and evidence of basal ganglia autoimmunity. Brain. 2004 Jan;127(Pt 1):21-33.

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