A case of anti-NMDA receptor encephalitis revealed by insular epilepsy

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Epileptic Disorders

Clinical manifestations

- Case presentation
  - Young male patient
  - New-onset focal epilepsy, with temporal or insular symptoms
  - Normal background EEG and MRI

- Clinical features pointing to automimmune encephalitis
  - Subtle signs of cognitive and behavioural disorder
  - History of systemic autoimmune disorder

Ictal semiology

- Insular semiology presented by the patient:
  - sensitive symptoms distributed to a large cutaneous area without clear somatotopia or Jacksonian march
  - somato-sensitive symptoms ipsilateral to ictal discharge
  - prolonged initial drooling
  - prolonged phase without impairment of awareness

Paraclinical tests for NMDAR encephalitis - 1

- **MRI**: unremarkable in 50% of cases (Dalmau *et al.*, Ann Neurol 2007)
- **F18-FDG-PET**: hypermetabolism in mesiotemporal structures correlated with focal slow activity on surface EEG in NMDAR encephalitis (Probasco JC *et al.*, 2014)

- **EEG**:
  - Generalized or fronto-temporal delta or theta slow waves in 77% of patients, and epileptic activity in 23% of patients

    (Dalmau *et al*., 2008; Kim *et al.*, 2009).
  - A particular pattern: “extreme delta brushes”

    (Schmitt *et al*., 2012, Veciana M *et al*., 2015)

Paraclinical tests for NMDAR encephalitis - 2

- **CSF analysis**:
  - Abnormal in 80% of patients (Dalmau *et al.* Lancet Neurol 2011)
  - Mild lymphocytic pleocytosis, normal or mildly increased protein concentration
  - Oligoclonal bands in 60% of patients
  - Gold standard: detection of IgG1 or IgG3 antibodies directed against the NR1 subunit of the NMDA receptor

✓ Total body PET-CT should be performed to exclude a paraneoplastic disorder.