Hormone Wars: The Thyroid Strikes Back! A Case of Hashimoto Encephalopathy Manifesting as Diffuse Extremity Weakness and Confusion

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A 42-year-old female with a past medical history of schizoaffective disorder recently discontinued on multiple psychiatric medications, stable HIV, and hypothyroidism presented with a chief complaint of diffuse extremity weakness and Parkinsonism-like symptoms.

### Admission Labs and Work Up:
- **Mental status:** disoriented to time, place, situation. Oriented to person.
- **Neuro:** CN II-X intact. XI: 0/5 muscle strength on shoulder shrug or head turn. Bilateral shoulder and forearm strength 1/5 bilaterally; hip and thigh flexion/extension 0/5 bilaterally; sensation intact to bilateral upper and lower extremities.
- **Exam:** T 98.8°F, BP 114/66, P 73, RR 18, SpO2 94% on room air.
- **History of Present Illness:**
  - Abrupt onset confusion at facility and decreased level of interaction at the state.
  - 2-week history of “feeling paralyzed” with difficulty ambulating.
  - Recent long-term hospitalization at a psychiatric facility as a ward of the state.
  - 4-month history of jerking leg movements bilaterally.
  - Recent long-term hospitalization at a psychiatric facility as a ward of the state.
  - Multiple changes to psychiatric medication regimen, including abrupt discontinuation of clozapine and risperidone.
  - Abrupt onset confusion at facility and decreased level of interaction at facility prior to admission.

### Case Presentation
- The patient's condition is suggestive of neuroleptic catatonia. In this patient, this was negative.

### Work Up and Hospital Course
- **Imaging studies without acute abnormality:** CT head w/o contrast, MRI.
- **Continuous EEG:** non-specific slowing suggestive of encephalopathy.
- **Blood, CSF, urine cultures:** show no growth.
- **CSF fluid analysis:** elevated protein, mildly elevated glucose.
- **EEG findings:** consistent with encephalopathy.
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- **MRI:** normal, some cases with focal hyperintensity.

### Management
- **High dose prednisone with a prolonged course and taper:** often months-long taper and 4 days of IVIG with resolution of muscle weakness.
- **This patient responded to high dose prednisone for 2 weeks with a prolonged taper and 4 days of IVIG with resolution of muscle weakness and confusion.**

### Discussion

#### Overview
- Hashimoto encephalopathy is a rare disorder affecting patients who are commonly euthyroid, though to be an immune complex inflammatory response in the cerebral vasculature:
  - HE more commonly affected by women than men.
  - It is characterized by fluctuating neurologic symptoms, most commonly behavior disturbances, confusion, and gait disturbances.

#### Diagnosis
- **TSH can range from euthyroid to hypothyroid.**
- **TPO Ab and Thyroglobulin Ab are commonly significantly elevated.**
- **CSF findings:** elevated protein, lymphocytic infiltrate.
- **EEG:** non-specific slowing suggestive of encephalopathy.
- **MRI:** normal, some cases with focal hyperintensity.

#### Conclusion
- **Here we present a 42-year-old female with a rare case of Hashimoto encephalopathy manifesting as confusion and weakness.**
- **The most common clinical presentations for HE include cognitive impairment, ataxia, and focal neurologic deficits.**
- **This case demonstrates that presentation of a primary autoimmune disorder can manifest despite normal TSH and unrevealing imaging findings.**
- **This patient responded to high dose prednisone for 2 weeks with a prolonged taper and 4 days of IVIG with resolution of muscle weakness and confusion.**

### References