Supplementary Fig. 1 Decision tree. (A) Rigidity and bradykinesia. (B) Myoclonus. (C) Chorea and ballism. (D) Dystonia. (E) Eye movements and ataxia.
Other key clinical features

Drug exposure
- altered mental status, hyperthermia, rigidity, and dysautonomia

Stigmata of liver or renal disease
- Metabolic abnormality (labs)

Signs of infection
- Seizures +/- EEG findings
- CSF studies
- Brain imaging signs

Abnormal eye movements
- Dysarthria, dysphagia
- Limb +/- body ataxia
- Brain imaging signs

Akinetic mutism
- Executive slowing
- Lower limb myoclonus with falls

Phenomenology

Myoclonus

Serotonin syndrome

Metabolic encephalopathy
- e.g., Uremia, hepatic encephalopathy

Cerebral cortical irritation
- e.g., encephalitis

Brainstem pathology
- e.g., brainstem encephalitis, acute demyelination

Anoxic brain injury

Supplementary Fig. 1 (Continued)
**Supplementary Fig. 1 (Continued)**

**Phenomenology**
- Chorea, Ballism

**Associated "emergencies"**
- Stroke (basal ganglia)
- Metabolic
  - Glucose, electrolyte levels
  - Renal/hepatic stigmata
  - Toxin exposure (CO, methanol)
- Autoimmune, Infectious
  - Stigmata of inflammation (e.g., Lupus)
  - Rapidly progressive dementia (HIV, CJD)
  - Seizures +/- EEG findings
  - CSF studies
  - Brain imaging signs
- Post-infectious
  - Rheumatic fever
  - Skin and joint findings
- Pregnancy-related
  - History of rheumatic fever
  - History of lupus, APLA syndrome

**Other key clinical features**
- Hemibody involvement
- Apathy, depression
- Hemiparesis
- Glucose, electrolyte levels
- Renal/hepatic stigmata
- Toxin exposure (CO, methanol)
Supplementary Fig. 1 (Continued)
Other key clinical features

Phenomenology

- Brainstem lesions
- Cerebellar lesions
- Frontal, parietal cortical lesions
- Midline brain tumors, Hydrocephalus
- Toxic-Metabolic
- Inflammatory

E Associated "emergencies"

- Various eye movement paresis
  Limb +/- gait ataxia
- Multidirectional or down-beating nystagmus
  Limb +/- gait ataxia
- Gaze deviation
  Saccadic abnormalities
- Pupillary abnormalities
  Upgaze restriction
- Convergence anomalies (Wernicke)
  Pupil size (toxins)
  Opsoclonus (serotonin syndrome)
  Confusion
- Lid droop (Myasthenia)
  Opsoclonus (brainstem inflammation)