Objectives:
- TGA:
  - define TGA
  - outline standard ED workup
  - discuss likelihood of it being anything bad
- Movement Disorders
  - Transient Global Amnesia (TGA)
    - Somewhat rare clinical syndrome:
      - short-term memory impaired (repetitive questions)
      - access to long-term memory severely impaired
      - no other neurological symptoms
    - Timeframe: 1 hr (15%) – 7 hrs (avg) – 1-4 weeks. 10% recurrence rate.
    - Acute Confusional Migraine in kids thought to be similar
- Associations and Possible Causes:
  - common: migraine (younger adults, competitive sports)
  - much less common: CVA or TIA
  - seizures
  - stress (? risk for migraine/seizure)
  - less common:
    - exercise/subclavian steal
heavy lifting with PFO (presumed embolic CVA)
- drugs (OCP, propafenone, heparin, Viagra)
- vasospasm from angiograms
- early encephalitis
- CNS AV fistula
- cerebral thrombophlebitis
- aortic dissection
- cold-water immersion
- sex
- acute MI
- venous reflux of the internal jugular

One study: sum of risks (physical exertion, emotional stress, sexual intercourse or immersion in cold water)

ED Workup:
- CT and MRI: could be CVA or TIA though not likely
- High yield for structural lesions (?) predisposing factor
- Admit for observation, ? EEG, ? echo with bubble test

Cases
- Frequent myoclonus:
  1. Goes on to have generalized seizure.
  2. Fat. Has VBG with pCO2 of 77.
10-year old with sore throat for a week. Now with fever, joint aches, serpiginous red rash, and twitching of face.

22 year old woman, college student, found sitting on doorstep at 6 AM, confused, naked, rhythmic restless movements of arms and legs. On Prozac, just prescribed Biaxin yesterday for bronchitis.

Parkinson’s, on C/L 10/100 one tablet six times/day, clonazepam 0.5 mg twice daily and fluoxetine 20 mg/day, he was placed in a clinical trial with the dopamine receptor agonist, pramipexole. The dose was being slowly escalated according to protocol with little trouble until one evening when it is believed he took additional C/L. He had an abrupt escalation of choreiform dyskinesia to severe levels for hours; dry, diaphoretic, low-grade temperature. Rx: admit, hold all Parkinson’s meds for 12 hours.

Parkinson’s, getting on-off, recently treated with more frequent C/L doses, amantadine, anticholinergic medications, bromocriptine, pergolide, selegiline, and controlled release C/L was on C/L 25/100 every 2 hours for 11 doses and pergolide 1 mg three
times daily when she had a sudden onset of severe dyskinesia alternating with severe immobility. For 3 days she was febrile, 101°F. During periods of dyskinesia she was short of breath and unable to swallow. In the ED her respiratory rate varied from 20 to 50 breaths/minute. She had decreased breath sounds and crackles heard on the left side. For several hours in the ED, without intervening doses of C/L, she “yo-yoed” between severe dyskinesia and severe immobility every 15 minutes or so. Rx: For the first 24 hours her C/L was held.

- PD Psychosis: treat with Seroquel (quetiapine) or Clozaril (clozapine), not Risperdal (risperidone) or Zyprexa (olanzapine)
- PD “off”: consider treatment with SQ apomorphine.
- PD chorea: benzos, withdraw C/L etc.

Movement Disorders: ‘Not everything that shakes is epilepsy’
- First differential: seizures vs. non-epileptiform seizure disorders
- PNED: paroxysmal nonepileptiform movement disorders
- Syncope: cardiac, postural, clonic
- **H** hyperventilation:
- **T** Toxic-metabolic: DTs, porphyria, glucose, asterixis, tonic spasm of tetanus, rabies, strychnine, black widow spider, electrolyte, drugs,
- scorpion stings.
- **C** cerebrovascular: TIA, VBI, migraine (acephalgic, basilar, torticollis,
- moyamoya, transient global amnesia)
- **N** Narcolepsy
- **Acute movement disorders**
- + dystonia, chorea, athetosis, tremors, tics, myoclonus, familial paroxysmal dystonias
- + local neck disorders
- + pseudoseizures
- + Sandfer's syndrome: torticollis to avoid reflux, in kids.

- Parkinson's Disease
- Motor problems with treatment:
  - 1. Wearing-off effect:
    Antiparkinsonian effect of levodopa wears off toward the end of dose in a predictable fashion
  - 2. Complicated wearing-off:
    Duration of response of levodopa becomes variable so that the timing
of wearing off becomes less predictable.

- 3. No-on: A dose of levodopa has no effect
- 4. On-off: Response to levodopa varies in an unpredictable manner unrelated to timing of the dose

**Common ED Presentations**

- 1. Fluctuations in response to levodopa (new onset or sudden changes)
- 2. Involuntary movements (dyskinesia): choreic or dystonic
- 3. Distressing sensory syndromes: pain, akathisia, restless leg syndrome
- 4. Psychiatric symptoms: psychosis, confusion, panic disorder, depression, mania, intermittent moaning and screaming, aberrant hypersexual behavior
- 5. Autonomic dysfunction: orthostatic hypotension, gastrointestinal dysfunction
- 6. Complications of immobility and the bedridden state: aspiration pneumonia, thrombophlebitis, pulmonary embolism, decubiti, sepsis
- 7. Complications of falling: fractures
Deep Brain Stimulators (DBS): also used for chronic dystonia, essential tremor

- Common ED presentations: (in order of frequency): headache, decreased mental status, syncope, falls. Study shows that usually these have nothing to do with the DBS.

Review Objectives