Case

A 21-year-old healthy male presents to the ED after passing out during soccer practice

Family history is significant for an uncle who died from sudden death at 27

Hypertrophic cardiomyopathy

- 50% autosomal dominant
- Sm: DOE(most), syncope, arrhythmia (afib most), ischemic chest pain, SCD(vfib)
- ECG: LVH, afib, VPCs
- TTE: LVH, septal hypertrophy
- Rx: Beta-blockers, avoid inotropic agents

Case

A 31-year-old female presents to the ED after a syncopal episode while taking care of her kids

Her physical exam is significant only for right adnexal tenderness

Ectopic pregnancy

- Triad: pain, spotting, missed period
- Sm: syncope, hypotension, tenesmus, shoulder pain
- Urine EIA (+) if serum beta-hCG >20 mIU/mL
- Discriminatory zone (gestational sac visualized)
  - TAUS: beta-hCG >6000 mIU/mL
  - TVUS: beta-hCG >1500 mIU/mL
- Mx: methotrexate(MTX), surgery
- Consider RhoGAM to Rh(-) patients

Case

A 17-year-old female with no past medical history presents to the ED after passing out while giving blood at Red Cross

Observers noted she seemed diaphoretic and nauseous prior to passing out

Vasovagal syncope

- Benign
- Warning sm: lightheadedness, nausea, or diaphoresis
- Predisposing stimulus: blood drawing, fear, urination, defecation, coughing

Case

A 65-year-old male with history of hypertension, dyslipidemia, and CAD presents after passing out

His physical exam is significant for abdominal tenderness and bruits

Abdominal aortic aneurys

- Sm: sudden onset of severe abdominal and/or back pain (more often left back/flank); pain radiates to the groin, simulating renal colic, syncope, pulsatile abdominal mass, femoral neuropathy. Hypotension is classic, though unreliable
- Hx of **AAA repair + GI bleed** = aortoenteric fistula

Case

A 24-year-old female is brought in by emergency medical service (EMS) when she was observed to pass out at the mall soon followed by rhythmic movements of her extremities

Physical exam is significant for lateral tongue bites

Seizure

- **ICTUS**: Incontinence, cyanosis, tongue biting, upward gaze, salivation/shaking
- Status epilepticus: 30 minutes of continuous seizure activity or a series of seizures without return to baseline consciousness between seizures
- Rx: Benzodiazepines (diazepam, lorazepam), valproic acid, phenytoin, phenobarbital, propofol for refractory sz, magnesium sulfate for eclampsia

Case

A 62-year-old male is brought from home by his wife after he passed out

His history is only significant for HTN and DM

She mentioned he seemed diaphoretic prior to the event and also missed breakfast

Hypoglycemia

- Sm: agitation, confusion, coma, seizures, tachycardia, diaphoresis
- Can mimic stroke (focal neuro deficits)
- Rx: D50W, D25W, D10W, **glucagon** (1 mg IM), **octreotide** (Sandostatin 75 mcg SQ, for sulfonylurea overdose)

Case

27-yr-old woman with hx of AGE 1 week ago now presents with symmetric ascending weakness of her legs and paresthesias

PE: diminished reflexes

LP: above normal protein

Guillain-Barre syndrome

- Demyelination dz
- S/S:
  - Acute symmetrical ascending weakness
  - Hyporeflexia
  - Cranial nerve deficit — 50% cases
  - Variable sensory findings
  - Urinary retention (∵ dysautonomia)
  - Respiratory muscle weakness
  - Progression of symptoms over days to 4 weeks

Guillain-Barre syndrome

- Tests:
  - CSF: increased CSF protein (albuminocytologic dissociation)
  - Forced vital capacity (FVC) testing, ABGs
  - EMG/NCV (demyelinating peripheral nerves)
- Treatment:
  - Secure airway and breathing 〔30% intubation〕
  - Hemodynamic monitoring ∵ dysautonomia
  - Shorten the course：plasma exchange, IVIG

Miller Fischer variant

- Prominent cranial nerve findings
- Descending pattern of weakness

Case

58-year-old woman with an hx of breast cancer presents with radicular pain of her legs, urinary retention, and lower back pain

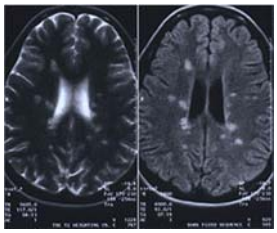
PE: saddle anesthesia and absent ankle jerk reflexes

Cauda equina syndrome

- Emergency: OP **within 48 h**
- Risk: metastases, trauma, HIVD
- Sm: urinary or bowel incontinence, decreased rectal tone, perianal (saddle) paresthesia, bilateral loss of DTRs, impotence
- Emergent CT or MRI

Case

18-year-old woma-n presents with slow onset of paresthesias, diplopia, numbness of left upper extremity



Multiple sclerosis

- Multifocal demyelination, CNS, autoimmune
- Age: 15~50 yr
- Any neurologic deficit, relapsing & remitting E.g. sensory deficit, paraplegia, optic neuritis, diplopia, headache, incontinence, ataxia, spastisticy, tremor
- **Uhtoff phenomenon**: a small increase in patient's temperature exacerbate S/S (hot weather, exercise, fever, saunas, hot tubs)

Multiple sclerosis

- Dx: MRI: periventricular demyelination, **oligoclonal bands** or elevated IgG in the CSF, abnormal visual evoked potentials
- Rx: **solumedrol**, immunomodulatory drugs (interferon), immunosuppressants

Case

61-year-old man with an hx of colon cancer presents with an insidious onset of disequilibrium and dizziness that has been present for months

PE: vertical nystagmus and ataxia

Central vertigo

Table 2-3 Central Versus Peripheral Vertigo

	Central	Peripheral
Onset	Slow (can be sudden)	Sudden
Severity	Vague	Intense
Nystagmus	Vertical	Horizontal-rotatory
Auditory symptoms	No	Can have Sx
Pattern	Constant	Intermittent
CNS symptoms	Yes	No
Prognosis	Usually serious	Usually benign

Central vertigo: 6 D

Warning S/S (6D):

1. Dysequilibrium / ataxia
2. Dysmetria
3. Dysarthria
4. Dysphagia
5. Diplopia
6. Darkness / blindness