NEUROCRITICAL CARE

Coagulopathy  
- prothrombin-complex concentrate: contain factors II, VII, IX, and X  
 - no need for type and cross matching  
 - dose: 50U/kg  
- vitamin K: 5-10mg PO or IV  
- FFP: 15ml/kg

- ASA 81mg: 85% of platelet function is knocked out  
- ASA 325mg: 95% of platelet function is knocked out

Coma, Initial approach  
- C, A, B, Vitals  
- correct hypothermia, hypotension  
- if trauma, CT head and C spine  
- CBC, CMP, PT/PTT, ABG, CO, UDS  
- consider IV naloxone or flumazenil (narcotic and benzodiazepine overdose, respectively)  
- If CT and MRI are normal, consider EEG

HYPERCOAG WORKUP  
- Proteins C & S  
- Factor V Leiden  
- Antithrombin  
- Prothrombin gene mutation 20210A  
- PT/INR, aPTT  
- Lupus anticoagulant  
- Anticardiolipin antibodies (IgG, IgM, IgA)  
- Fibrinogen

STATUS EPILEPTICUS  
- seizure lasting > 5 minutes or persistent seizure activity despite administration of first and second-line AEDs

Hyponatremia

Seizures

Status epilepticus  
- C, A, B  
- Ativan 0.1mg/kg, repeat Q2-3 minutes up to 5mg total  
- Dilantin 15-20mg/kg  
- Keppra 25-5-mg/kg  
- Phenobarbital 10mg/kg  
- Glucose, Mg, Ca, blood gas, AED level if on them

Meningitis

Pulmonary embolism

Hypotension

Endocrinopathies   
Acromegaly – elevated IGF-1

Endocrine work-up:  
- prolactin  
- cortisol [8AM, random, 24 hour urinary, salivary]  
- ACTH  
- TSH/T4  
- GH  
- IGF-1  
- testosterone  
- FSH/LH  
- estrogen

Oral glucose tolerance test - Acromegaly

Cushing’s workup

Pseudo-Cushing  
- pregnancy  
- medications  
- PCOD  
- depression

Management of diabetes insipidus  
- ddAVP

Management of SIADH

Acromegaly  
- heart study (cardiomyopathy)  
- colon polyps (colon cancer)  
- endocrine workup

Neuroleptic malignant syndrome (NMS)  
- idiosyncratic (non-allergic) reaction to neuroleptics  
- results from acute blockade of brain dopamine receptors  
- can occur rarely if Sinemet is abruptly discontinued  
- presentation: coma, rigidity, fever, seizures, elevate creatinine kinase, autonomic instability  
- diagnosis is confirmed with very high creatinine kinase level  
- brain imaging and LP to rule out other conditions  
- treatment: drug discontinuation, cooling, and supportive therapy  
 - dantrolene and diazepam can reduce muscular rigidity  
 - some patients respond to bromocriptine, which stimulates postsynaptic dopamine receptors  
  
Serotonin Syndrome

Oculovestibular “cold caloric” reflex  
- Lateral jerk nystagmus of the eyes toward the nonirrigated ear occurs in conscious patients, but not in comatose patients where cortical function is depressed  
- may be absent in patients with mastoiditis, previous labyrinthine trauma, benzodiazepine or barbiturate toxicity

Pupillary exam  
BILATERAL MIDPOSITION PUPILS: midbrain lesions, terminal anoxic brain injury  
PINPOINT PUPILS: pontine lesion interrupting the descending sympathetic fibers, cholinergic eyedrops for glaucoma, narcotic overdose  
- afferent limb of pupillary reflex: pupillomotor information from the retina  
- efferent limb of pupillary reflex:

MAP = [2DP + SP]/3