EmergencyKT: Adrenal Insufficiency

No previous diagnosis of adrenal insufficiency (AI)
Suspect AI if:
- GI symptoms, weight loss
- Weakness, fatigue, myalgias/arthralgias, mild fever
- Headache, memory impairment, depression
- Orthostasis/syncope, BP ≤110/70
- Electrolyte abnormalities: hyponatremia, hyperkalemia, hyperchloremia, acidosis, hypoglycemia
- Hyperpigmentation, vitiligo, alopecia

Previous diagnosis of adrenal insufficiency (AI)
On Steroid Replacement Therapy

Hypotensive?
Yes

Mild Illness (i.e. URI/UTI)
Have patient double steroid dose for 2-3 days
(ex: if taking hydrocortisone 20 mg @8AM and 10 mg @6PM, now have patient take 40 mg @8AM and 20 mg @noon* for 3 days then resume normal regimen)

Yes

Begin resuscitation:
Administer 2-3 L NS IVF
Draw random Cortisol

Blood pressure improves with fluid resuscitation?
Yes

Moderate Illness (i.e. CAP/Pneumonia)
Have patient double steroid dose for duration of treatment
(ex: if taking 5 days of antibiotics and on hydrocortisone 20 mg @8AM and 10 mg @6PM, now have patient take 40 mg @8AM and 20 mg @noon* for 3 days then resume normal regimen)

No

Initiate vasopressor therapy as needed

Severe Illness

Administer hydrocortisone 50 mg IV q 6 hours

Search for and treat underlying cause:
- Sepsis: treat with empiric abx
  - UA & Ucx
  - Blood cx
  - CXR
  - CBC, EP1, LFT's, lipase, lactate, VBG
- Helpful but not necessary:
  - draw aldosterone, renin, TSH, fT4, ACTH
- MI
  - EKG
  - Troponin
- Consider CT imaging
  - Head
  - Abdomen/pelvis

Cortisol <15 OR
Δ cortisol ≤9
Admit to ICU

Cortisol ≥15 AND
Δ cortisol >9
Admit to ICU

Admit to Medicine

Random level ≤10 mcg/dl
Random level 10-20 mcg/dl
Random level ≥ 20 mcg/dl

Draw Random Cortisol**

*Cortisol can cause insomnia so it is better to take it earlier in the day. This regimen better mimics diurnal variation.

**Specimens should be collected in gold top tube. It takes analyzer 38 minutes to run the test once received; tests are run 24/7.