HIV vs. AIDS
- Human Immunodeficiency Virus attacks hosts T cells causing an immunocompromised state
- AIDS is defined as a CD4 counts < 200 or presence of an AIDS-defining illness

Identify acute HIV infection
- Acute HIV infections are often misdiagnosed as viral syndromes, typically present with nonspecific fever, fatigue, pharyngitis, viral rash, N/V/D, headache, and lymphadenopathy
- Symptoms typically develop 2-4 weeks post exposure
- Evaluate for high risk behaviors for contracting HIV: sexual (men who have sex with men, unprotected intercourse with multiple partners), sharing needles for injection drug use, maternal-fetal transmission
- Send screening tests from ED in patients at high risk for HIV/AIDS
  - ELISA: screening test, measures antibody response to virus, turns positive after 3-12 weeks; if positive → confirm with Western Blot test
  - Antigen/Antibody test: turns positive 10-25 days post exposure

Evaluate and treat based on presenting symptoms
- All patients:
  - Send CD4 counts/viral load
  - Increased risk of opportunistic infections, especially with CD4 < 200
  - Don’t forget to always consider/treat for common bacterial pathogens – the same dangerous pathogens that infect immunocompetent patients also affect AIDS/immunosuppressed patients, so start empiric broad-spectrum antibiotics in patients with suspected infection
  - Neurologic complaint: altered mental status, headache, focal neurologic deficits
    - These patients need a CT brain (to rule out mass lesion), followed by an LP to rule out meningoencephalitis
    - Cryptococcus:
      - Patients at risk with CD4 < 100
      - Can cause focal cerebral lesions or diffuse meningoencephalitis
      - Diagnose with serum cryptococcal antigen, CSF cryptococcal antigen, India ink stain
      - Treat with IV amphotericin B and PO flucytosine
    - Toxoplasmosis
      - Common cause of focal encephalitis in AIDS patients, occurs when CD4 < 100
      - Subcortical ring-enhancing lesions seen on CT brain
      - Treat with Bactrim or pyrimethamine, sulfadiazine, folinic acid
    - Progressive Multifocal Leukoencephalopathy (PML)
      - Caused by JC virus leading to demyelination
      - Presents with progressive neurologic deficits over weeks to months
      - Multiple foci of disease seen on CT
      - May improve with treatment of underlying AIDS, treatment is otherwise supportive
      - Other etiologies to consider: AIDS dementia, primary CNS lymphoma, neurosyphilis, CNS TB, HSV encephalitis
- Pulmonary complaint

https://foundationsem.com/
Most common cause of PNA in AIDS patient is streptococcal pneumonia

PCP (Pneumocystis carinii pneumonia or Pneumocystis jirovecii pneumonia)

- Occurs when CD4 counts < 200
- Fever, dry cough, SOB
- XR chest – classic finding is bilateral perihilar infiltrates (“bat wing” sign), but many patients can have normal chest XR
- Treat with Bactrim, add steroids if patient is hypoxic (PaO2 < 70)

Place patient in negative airflow room to rule out tuberculosis

- Patients with AIDS are at much higher risk of TB activation, presentation can be very subtle if patient is severely immunosuppressed

Eye complaint

- CMV retinitis:
  - Presents with changes in vision - decreased acuities, visual field cuts, red/painful eye
  - Requires urgent ophthalmology consult and IV ganciclovir

Dysphagia

- Evaluate for CMV vs HSV vs Candida esophagitis
- Typically presents with CD4 counts < 100
- Consult gastroenterology for EGD to evaluate for CMV and HSV; presumptively treat for esophageal Candida with oral fluconazole

Diarrhea

- Send stool leukocytes, bacterial culture, ova and parasites, acid fast stain, C. difficile toxin
- Numerous opportunistic infections (Cryptococcus, Cryptosporidium, Isospora) can cause diarrhea depending on level of immunocompromised state
- If HDS, well appearing, tolerating PO, can often follow-up as outpatient; admit patients for further management if ill and/or severely dehydrated

References:

- Sax, PE. Acute and early HIV infection: Clinical manifestations and diagnosis. Last updated: Apr 19, 2017. Uptodate.com