Amebiasis

Key Points
1. Amebiasis is common worldwide but most are asymptomatic.
2. It is NOT a common cause of traveler’s diarrhea and usually requires prolonged travel stay for luminal disease as compared to liver abscesses which can occur with short exposure time.
3. Do not FNA liver abscesses if amebiasis is suspected; treat empirically and watch for improvement.
4. Liver abscesses require same treatment as for diarrheal disease but need paramomycin to clear luminal cysts.

LUMINAL DISEASE

Epidemiology
- Organism is *Entamoeba Histolytica*
- 40-50 million people infected world-wide per year, especially in countries with poor sanitation and 40,000 deaths/year.
- In US prevalence is 4% with high risk groups being travelers, immigrants, institutionalized patients, gay men.
- NOT a common cause of traveler’s diarrhea. Unusual to acquire luminal disease if travelling <1 month to endemic area.

Lifecycle of organism
Ingestion of cysts via contaminated water/food. One cyst can cause disease! Once in small intestine, trophozoites hatch. Trophozoites then penetrate colonic mucosa to cause bloody diarrhea. Symptoms occur 1-3 weeks after exposure. In liver abscesses, organism ascends via portal venous system.

Symptoms
Over 90% are asymptomatic. Risk factors for disease include steroid use, HIV, alcohol use, malignancy, pregnancy, malnutrition, very young.

Acute disease:
- Diarrhea: 94-100%
- Bloody stool: >94%
- Abdominal pain
- Weight loss: 50%
- Colitis with perforation: 0.5%

Chronic disease: mimics inflammatory bowel disease! See weight loss, diarrhea, abdominal pain.

Diagnosis

Stool
a) guaiac positive stool, NO fecal leukocytes
b) stool ova and parasite: see cysts or trophozoites. Send 3 specimens on separate days (85-95% sensitive)

Serologies
a) antibodies present in 5-7 days (92-97% sensitive) and persist for years so positive result may be old infection.
b) IHA (indirect hemagglutination): 90% sensitive
c) Antigen testings: in development

Treatment
**Treat even if asymptomatic**
--metronidazole 750 mg PO TID x 10 days (cure rate 90%) or
--tinidazole 2 gms PO x 3 days or
--can use tetracycline/erythromycin

Prevention
Avoid drinking untreated/unboiled water. Cysts resistant to chlorine but eliminated by iodine.
EXTRA-LUMINAL AMEBIASIS (Liver Abscesses)

Epidemiology
Risk factors same as above but 7 times more prevalent in men than women. Can occur in travelers even when in endemic area for as few as 4 days. In one study, >35% of travelers spent <6 weeks in area. While liver abscesses are the most common manifestation of extra-luminal amebiasis, can see cardiac involvement, pulmonary/pleural disease, brain abscesses.

Symptoms
Usually occur within 8-20 weeks after exposure, although reported to occur 12 years after exposure!
- Fever for 1-2 weeks
- RUQ pain
- Tender hepatomegaly: >50%
- Diarrhea: <30%
- Jaundice <10%

Diagnosis
Blood: leukocytosis, no eosinophils, increased liver transaminases
Serologies: see above
Stool: fecal microscopy positive in only 18%
Imaging: consider U/S, CT, MRI

Treatment
Antibiotics: Give same antibiotics as with luminal disease except cannot use tetracyclines or erythromycin. No need for prolonged treatment. Must treat for luminal cysts as well with paromomycin (30mg/kg divided in 3 doses for 5-10 days).
Aspiration? NO! Can lead to bleeding, amebic peritonitis, rupture of echinococcal cysts. Consider aspiration if no improvement in 3-5 days of Rx. See classic “anchovy paste” and chocolate colored fluid on biopsy (necrotic hepatocytes).

Prognosis
Great with treatment! Mortality <1% if treated early. Initially can see increase in size of liver lesions once treatment is started and lesions can be present for years afterwards. No need to reimaging if patient has improved clinically. Poor prognosis in those with high bilirubin, albumin <2.0, encephalopathy, numerous abscesses.