City-Wide Case Conference

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50’s y/o man with a history of HIV (Cd4: 462, VL: undetectable) on TAF/FTC/c/EVG presents (Sept 2018) with:

- Progressive lethargy, anorexia, nausea x 1 week
- Very dark urine, yellowing of the eyes x 1 day led to ER presentation
- He denied fever, chills, abdominal pain, diarrhea, or dysuria, genital or oral lesions
- No new medications, including OTC medications, and no herbal supplements
- No known sick contacts

- **PMH**
  - HIV, well controlled (Dx in 2017)
  - HCV Ab+, VL neg (at time of HIV Dx)
  - Inflammatory arthritis (not active)
  - Hypothyroidism

- **Meds**
  - Genvoya (TAF/FTC/c/EVG)
  - Levothyroxine
  - Cetirizine
  - Remote indomethacin

- **NKDA**

- **FHx**
  - Sister with type 1 DM
  - Multiple family members with hypothyroidism

- **SHx**
  - Works in food catering for a nursing home
  - Lives with sister and two great-nieces (ages 10, 13) in Fishtown
  - Traveled extensively (remotely) in Western Europe and Caribbean
  - Occasional travel to the NJ shore on weekends – no recent cuts in skin
  - Rarely cigarette use
  - Drinks 2 glasses of wine/day; and had 5-6 drinks on the day prior to symptom onset
  - No illicit drug use
  - One new male partner (reported condom use) two weeks prior
  - Has a pet dog
  - No insect bites
  - No unusual food exposures

Exam

- Well appearing, no acute distress
- Mildly icteric sclera
- No oropharyngeal lesions
- No lymphadenopathy
- Regular rate and rhythm, no murmurs
- Lungs clear
- Abdomen soft, nontender, nondistended, no organomegaly
- No genital lesions
- No peripheral edema
- No rash, dark tan
- Mental status normal, no asterixis

Labs

- WBC 5.8 (normal diff), Hgb 16.2, Plt 363
- Cr 0.95
- AST 3996, ALT 3603, Alk Phos 180, tBili 7.4, dBili 4.8
- INR 3.0

- Hepatitis A IgG: reactive (8/2017)
- HBsAg: nonreactive (8/2017)
- Anti-HBs: reactive (8/2017)
- HCV Ab: reactive (8/2017)
- HCV Viral Load: undetectable (8/2017)

Abdominal ultrasound

1. No findings to explain patient's acute hepatic failure. No biliary ductal dilatation. No evidence of portal or hepatic venous obstruction.

2. Heterogeneous appearance of the partially contracted gallbladder. This either represents intraluminal sludge within the contracted gallbladder or diffuse reactive gallbladder wall thickening, such as to underlying hepatitis. No findings of acute cholecystitis.

- Differential and initial work-up?

- RPR: negative
- HIV VL: <20

- **HepA IgM: reactive**
- **HepA IgG: reactive**
- HepB SAg: nonreactive
- HepB CAb: reactive
- HepB SAb: reactive
- HBV VL: negative
- **HCV Ab: nonreactive**
- HCV VL: negative
- HepE IgM: nonreactive
- HepE RNA: negative

- CMV VL negative
- **EBV VL: 15,479 copies/mL**
- HSV-1 IgG: reactive
- HSV-2 IgG: nonreactive
- **HSV IgM: 0.98 (<0.89 is nonreactive)**
- RPP: adenovirus negative

- What do you think about the diagnosis now? Next steps?

Repeat labs

- HepA IgM: reactive
- HepA IgG: reactive
- HepC Ab: nonreactive
- HepA RNA (qualitative): positive

Two possibilities

1. False positive labs from 2017
2. Waning immunity

CASE REPORT

Acute hepatitis A infection after hepatitis A immunity in a HIV-positive individual

Ming Jie Lee,[1] Sam Douthwaite,[2] Ranjababu Kulasegaram[1]

Lee MJ, *et al*. *Sex Transm Infect* 2018;**94**:30–31.

Long-term Durability of Immune Responses After Hepatitis A Vaccination Among HIV-Infected Adults

Nancy F. Crum-Cianflone,[1,2] Kenneth Wilkins,[1] Andrew W. Lee,[3] Anthony Grosso,[3] Michael L. Landrum,[1,4] Amy Weintrob,[1,5] Anuradha Ganesan,[1,6] Jason Maguire,[1,7] Stephanie Klopfer,[3] Carolyn Brandt,[1,2] William P. Bradley,[1] Mark R. Wallace,[8] Brian K. Agan,[1] and the Infectious Disease Clinical Research Program HIV Working Group

- Initial vaccine seroresponses achieved in 89% study cohort.
- Among initial responders, 90% maintained an HAV IgG level >10 mIU/ mL at 3 years post-vaccination and 85% continued to have a protective level at 6–10 years (median time 8.2 y) post-vaccination

Table 2. Seropositive Response Rates[a] After HAV Vaccination Among HIV-Infected Persons, Stratified by CD4 Count at or Proximal to Vaccination

	CD4 count < 350 cells/mm^3		CD4 count ≥ 350 cells/mm^3	
Time	Number seropositive/ number evaluated	Seropositive rate (95% CI)[b]	Number seropositive/ number evaluated	Seropositive rate (95% CI)[b]
Initial response[c]	31/40	78% (62–89%)	85/90	94% (88–98%)
3 y	27/31	87% (70–96%)	75/79	95% (88–99%)
6–10 y	17/20	85% (62–97%)	46/54	85% (73–93%)

NOTE. HAV, hepatitis A virus; HIV, human immunodeficiency virus; 95% CI, 95% confidence interval.

[a] Data for 3 y and 6–10 y responses includes only those participants with a seropositive response at the initial time point.

[b] Seropositive rate: Exact binomial 95% confidence interval calculated using Clopper–Pearson method.