Citywide Conference

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HPI

50’s yo F presenting with abdominal pain for 1 week

- Intermittent, sharp and dull
- Lower quadrants and RUQ, worsening to involve the flanks and back
- Nausea + poor appetite. No vomiting
- Subjective fevers
Additional Hx

Presented to the ED 2 days prior

• Temp 38.1ºC
• CT abd/pelvis was unremarkable
• Labs were unrevealing
• UA: 0-5 wbc, no bacteria
• Urine culture: negative

She was diagnosed with “UTI,” given IV ceftriaxone x1, then discharged on cephalexin
PMHx

- HTN
- HLD
- DM
- Breast Ca (BRCA 2) s/p b/l mastectomy & chemotherapy in 2007, in remission
- Irritable bowel syndrome
- Hx of cholecystectomy
- B/l oophorectomy
Home Medications

- Aspirin
- Cephalexin
- Cymbalta
- Flonase
- Metformin
- HCTZ
- Atorvastatin
- Lisinopril
- Meloxicam
Social Hx

Former Tobacco user
Denies any alcohol or illicit drug use
Denies any recent travel
Denies any recent insect bites/tick exposure
Lives in transitional housing
Vitals

Temp: 38.0°C, Tmax 39.4°C

Heart Rate: 100 BPM

BP: 110/55 mmHg

SaO2: 97% on room air
Physical Exam


Eye: Conjunctivae clear, sclerae non-icteric; pupils 2-3 mm equally reactive to light

Mouth/Ear/Nose/Throat: No lip ulcers; oropharynx clear, no pharyngeal exudates; no sinus or mastoid tenderness

Neck: Supple without adenopathy or masses

Respiratory: Non-labored breathing; decreased breath sounds R base
Physical Exam (cont.)

Cardiovascular: S1/S2; no leg edema

GI: Abdomen soft, obese, +tender RUQ. No rebound or guarding

GU: No CVA or suprapubic tenderness

Lymphatic: no palpable cervical lymph nodes

Musculoskeletal: No joint tenderness/effusions; no cyanosis or clubbing

Neurologic: No focal deficits. Moves all extremities.
Labs

Neutrophils: 69.1
Lymphocytes: 19.4
Monocytes: 10.7
Eosinophils: 0

ALP: 73
ALT: 139
AST: 172
Total Bili: 0.5

Procalcitonin: 0.13
HIV negative
CRP 43.3
ESR 59
CXR

Elevation of the right hemidiaphragm
CT abd/pelvis w/ contrast

- Hiatal hernia
- Sigmoid diverticulosis without diverticulitis
- Osteopenia, age indeterminate L1 compression deformity
- No lymphadenopathy
Differential

Thoughts?

Further tests?
Hospital Course

- Cefepime and Vancomycin x1 in ED
- Admitted for abdominal pain with fever
- Antibiotics were not continued
Hospital course

Temperature Oral

DegC

Generates Normal High

Hospital Course

WBC: 5.6 -> 3.3 -> 2.3 -> 1.9
Hospital course

ALP: 99 -> 201 -> 215
ALT: 308 -> 599 -> 578
AST: 405 -> 927 -> 757
Total Bili: 0.4 -> 0.5
Differential

Further thoughts?
Additional Testing

Hepatitis A IgM negative
Hepatitis BsAg negative
Hepatitis Bc IgM negative
Hepatitis C negative

CMV PCR negative
HCV PCR negative
HBV PCR negative
Hospital course

• Started on doxycycline for possible tick-borne illness, Anaplasma PCR sent
Hospital course

- US liver: Mild hepatic steatosis

- MRCP: Mild hepatomegaly with steatosis, no biliary pathology. New small volume ascites and retroperitoneal fat stranding
Further thoughts?
Hospital course

• Anaplasma PCR negative

• Liver biopsy performed (core needle biopsy)
Biopsy: H&E staining
Biopsy: HSV Immunostaining
Biopsy Results

- Hepatic necrosis in a random distribution (portal and intralobular)
- Positive HSV immunostain consistent with herpes simplex virus hepatitis.
- Mild macrovesicular steatosis
- Portal fibrosis

Degree of portal and interface chronic inflammation greater than that expected from HSV hepatitis alone, perhaps underlying autoimmune hepatitis or drug-induced liver injury
Lab results

HSV1 IgM negative

HSV2 IgM positive, titer >1:320

Serum HSV1 DNA: Not detected

Serum HSV2 DNA: Detected
Acyclovir started
HSV Hepatitis

- Incidence in acute liver failure: 0.8% to 1%
- Often seen in immunocompromised and pregnancy
- Mucocutaneous lesions may be absent
- Both HSV-1 and HSV-2 known to be causative agents


HSV Hepatitis

- HSV often overlooked as a cause of acute liver failure
- Non-specific signs
  - Fever
  - Leukopenia
  - Transaminitis
- Potential for anicteric hepatitis


HSV Hepatitis: Diagnosis

- Mostly dx made post-mortem
- Liver biopsy is the gold standard
  - Areas of necrosis
  - Intranuclear viral inclusions
  - Immunostaining for HSV
- HSV PCR is more discriminating than serology


HSV Hepatitis: Treatment

Early initiation of high-dose acyclovir shows a trend towards improved survival and avoidance of liver transplantation

- Optimal treatment and duration are unknown
  - Reports of effective treatment has ranged from 1 week to lifelong
  - Prolonged course commonly administered to transplant recipients and immunosuppressed patients

Thank You