Hepatitis A

(AKA: epidemic or catarrhal jaundice)

Overview

Virology:

- family: Picornaviridae
- genus: Hepatovirus
- ss positive-sense RNA genome

Incubation: avg. 28 days
range, 15-50 days

Transmission: fecal → oral route
- contaminated food / water
- person-to-person contact

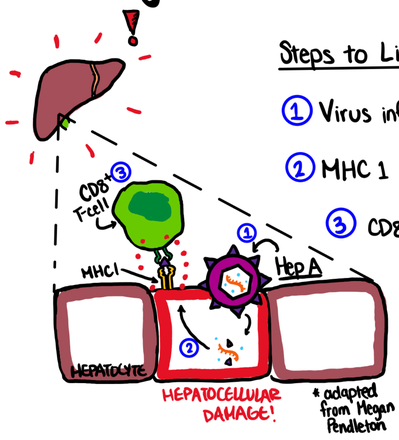
Risk Factors:

*adapted from Fiore, Wasley, Bell (2006)

- travel to/food from endemic regions (SEAsia, Africa, South/Central America)
- close quarters contact (e.g. daycare, military, nursing homes)
- injection drug use
- sexual transmission
- coinfection with other hepatitis viruses

Risk for fulminant liver failure
- age > 50
- underlying liver dz (chronic HepC > HepB)

Pathogenesis



*adapted from Megan Pendleton

Steps to Liver Damage

1. Virus infects hepatocyte
2. MHC 1 + viral peptide presentation
3. $CD8^+$ T-cells cause hepatocyte apoptosis
   +
   various activated immune cells release inflammatory cytokines
   ↓
   INFLAMMATION

Clinical Features

★ Asymptomatic in 30% of patients!

Course of disease: usually self-limited

T_0 abrupt onset –

GI:
- nausea/vomiting
- abdominal pain

Systemic:
- fever
- anorexia
- malaise

several days to weeks

conjugated! **hyperbilirubinemia:**
- dark urine (bilirubinuria)
- pale stools
- jaundice (peaks @ 2 weeks)
- pruritis

extrahepatic manifestations: (10-15%)
- rash
- arthralgias

Complications: by increasing frequency

<1%	5%	10%
Fulminant Hepatic Failure	Cholestatic Hepatitis	Relapsing Hepatitis
• + hepatic encephalopathy • impaired synthetic function (INR > 1.5)	• protracted jaundice (>3 mo) • + weight loss & diarrhea	• clinical relapse w/in 3 weeks • biochemical relapse w/in 12 mo

extrahepatic complications:

[Heme] **aplastic anemia**
- very rare
- develops 2-3 mo after acute sx

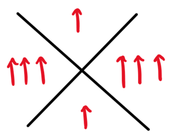
[Neuro] **Transverse myelitis**
- b/l sensory, motor, autonomic dysfunction attributable to spinal cord

Laboratory Findings

Transaminases:
AST, ALT → >1000
* peak 1 mo after exposure
* rises before bilirubin

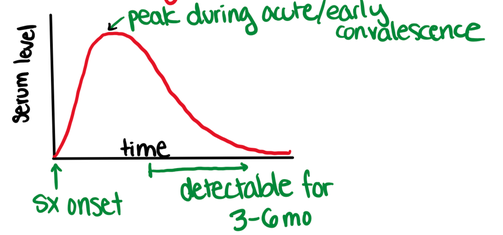
Alkphos: elevated
* usually < 400

Bilirubin: elevated
* direct bilirubinemia
* begins decline @ 2 weeks



Diagnosis

- Serum IgM anti-HAV antibodies



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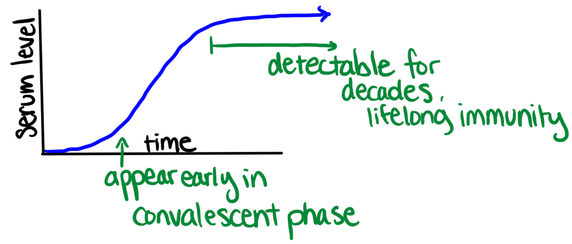

Treatment

- Self-limited, supportive care
- use caution w/ medications that
  ① cause liver damage
  ② are metabolized by the liver
- full recovery in 2-3 mo by most
  6 mo by nearly all

- vaccine prior to exposure
  - 2006, all children @ 1 year old

Dx
The Clinical Problem Solvers