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A Rare Case of Acute Hepatitis C Causing Coagulopathy and Severe Transaminitis

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INTRODUCTION

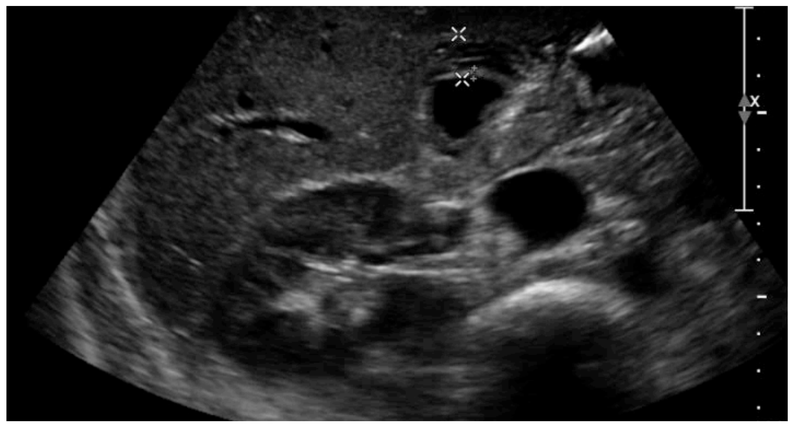
- **Although Hepatitis C (HCV) is extremely common, diagnosis of acute HCV is as rare as it is typically asymptomatic.**
- **The following is an uncommon presentation of symptomatic acute HCV resulting in sepsis, transaminitis, jaundice, and coagulopathy.**

CLINICAL COURSE

- **36-year-old man with past medical history of intravenous drug use presented with acute headache, chills and fever of 104.6ºF**
- **2 months (6 weeks, 4 days) prior to admission the patient was admitted to a neighboring medical center for unrelated trauma.**
  - **HCV antibody incidentally noted to be positive but HCV Quantitative PCR was undetectable at that time**
  - **Liver Function Tests (LFTs) were within normal limits**
- **Interim history was notable for chills and lethargy but without vision changes, neck stiffness or abdominal pain**
- **Physical exam: without jaundice, asterixis, or abdominal tenderness**
- **Abdominal ultrasound of RUQ showed slightly heterogenous appearance of liver concerning for hepatitis with doppler negative for portal or splenic vein thrombosis (Figure 1)**
- **Initial labs: Total Bilirubin 2.0 mg/dL, Direct Bilirubin 1.7 mg/dL, AST 176 IU/L, ALT 264 IU/L, alkaline phosphatase 304 IU/L, INR 1.26. On hospital days 3-5, liver enzymes peaked at the following values: Total Bilirubin: 8.2 mg/dL, Direct Bilirubin: 7.2 mg/dL, AST: 5455 IU/L, ALT: 3032 IU/L, ALP: 320 IU/L, INR 2.60 (Figure 2A and 2B)**
- **Serologic workup for cirrhosis and sepsis: Table 1 and Table 2**
- **The patient was again noted to have a positive HCV antibody but now had an HCV Quantitative PCR of 2.72 million**
- **This pattern with prior testing suggested acute HCV infection. The patient was given supportive treatment and clinically improved**
- **Prior to discharge his fevers resolved, LFTs down-trended, coagulopathy improved, and repeat HCV Quantitative PCR was 8140**

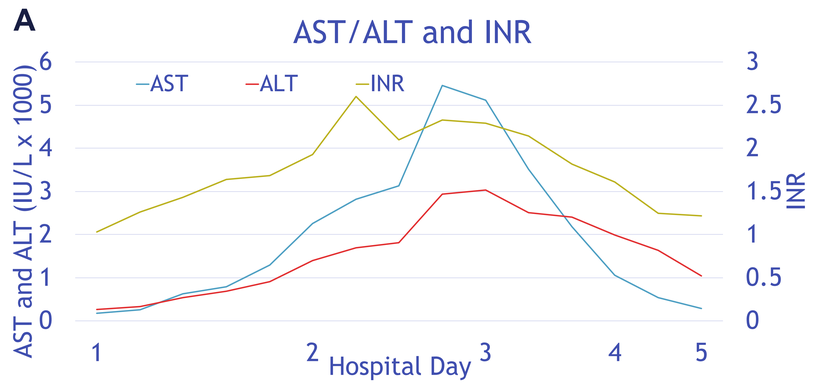
IMAGING

Figure 1: Slightly heterogeneous appearance of liver and gallbladder wall thickening without other signs of acute cholecystitis concerning for hepatitis



LIVER FUNCTION DURING HOSPITALIZATION

Figure 2: AST/ALT and INR (**A**) and Total and Direct Bilirubin (**B**) over course of hospitalization



LABORATORY RESULTS

Table 1: Infectious Workup

Lab	Value	Range
Hepatitis A Antibody, Total	Nonreactive	
Hepatitis A IgM	Nonreactive	
Hepatitis B Surface Antibody	Reactive	
Hepatitis B Surface Antigen	Negative	
Hepatitis B Core IgM, IgG	Negative	
Hepatitis C Antibody	Positive	
Hepatitis C PCR	2.72 Million	
Cytomegalovirus IgG, IgM	Negative	
Cytomegalovirus Quantitative PCR	Negative	
Epstein Barr Virus (EBV) VCA IgM	<= 36.00	<= 36.00 U/mL
EBV VCA IgG	69.40	< 18.00 U/mL
EBV EBNA IgG	> 600.00	< 18.00 U/mL
EBV PCR	Negative	
HSV 1 IgM, HSV 2 IgM	Negative	
HSV 1 and HSV 2 DNA PCR	Negative	
HIV Antigen/Antibody Combination	Non-reactive	
Varicella Zoster Virus PCR	Negative	
Lyme Antibody	Negative	

Table 2: Inflammatory, Rheumatologic, and Toxic Workup

Lab	Value	Range
Salicylates	<0.3	2.8-20.0 mg/dL
Urine Drug Screen	Positive for Fentanyl and Buprenorphine	
IgG	706	723-1,685 mg/dL
IgA	177	69-382 mg/dL
IgM	119	40-230 mg/dL
Serum Ethanol	Negative	
Phosphatidylethanol	Not Detected	
Gamma-Glutamyl Transpeptidase	212	6-24 IU/L
Acetaminophen	< 5	<= 25.0 mcg/mL
Ferritin	608	30-400 ng/mL
C-Reactive Protein	6.60	<= 0.80 mg/dL
Anti-Smooth Muscle Antibody	Negative	
Sedimentation Rate	11	0 - 15 mm/hr
Ceruloplasmin	47	18-36 mg/dL
Serum Copper	157	70 - 175 mcg/dL
Factor V Activity	129	50-150%
Fibrinogen	320	170 - 460 mg/dL
Antinuclear Antibody	Negative	
Ammonia	59	11-35 mmol/L

DISCUSSION

- **20-33% of patients with acute HCV are symptomatic with disease onset occurring between 2 and 12 weeks (mean of 7 weeks)[1]**
- **The constellation of serologies in this patient raise the possibility of new acute HCV infection (prior to outside hospitalization) or reinfection in the setting of active intravenous drug use**
- **The patient was scheduled with Hepatology but was lost to follow-up**

REFERENCES

[1] DynaMed. Acute Hepatitis C Infection. EBSCO Information Services. Accessed September 7, 2021. https://www.dynamed.com/condition/acute-hepatitis-c-infection

DISCLOSURES: The authors have no conflicts of interest to disclose.