Hepatitis with an Unknown Etiology with Concomitant ITP

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Background

- Alcoholic hepatitis usually presents after decades of alcohol consumption and can manifest with recent abstinence [1-2]
- Clinical presentation may be compounded by underlying cirrhosis and liver function tests are not a reliable means of diagnosing alcoholic hepatitis due to poor sensitivity and specificity [3-4]
- Hepatitis is only one of the major causes of thrombocytopenia [5]
- Immune thrombocytopenic purpura is a diagnosis of exclusion and further workup is warranted with persistent thrombocytopenia refractory to treatment for alcoholic hepatitis [6]
- Although there is limited data demonstrating a correlation between alcoholic hepatitis and immune thrombocytopenic purpura, both conditions respond to steroids [7].
- We present a case of a 42-year-old male with an unknown cause of hepatitis and concomitant immune thrombocytopenic purpura who responded well to steroids

Case Description/Methods

A 42-year-old male with a past medical history significant for alcohol use disorder (abstinent for 3 months), presented with acute bilateral lower extremity edema and diffuse petechiae

- Vitals were within normal limits
- Physical Exam: diffuse jaundice, scleral icterus, scattered ecchymoses on his extremities and flanks, with bilateral pitting edema
- Laboratory studies were notable for anemia, thrombocytopenia, hyponatremia, hypokalemia, abnormal liver function tests, and conjugated hyperbilirubinemia [Tables 1-2]
- Maddrey's Discriminant Function score was 84.6 and an extensive hepatitis workup was unremarkable
- Abdominal ultrasound revealed a nodular and echogenic liver of 19.8 cm
- Computed tomography confirmed cirrhosis with evidence for portal hypertension and splenomegaly [Figure 1]
- The patient was admitted for suspected alcoholic hepatitis and was treated with a 7-day course of prednisolone 40 mg daily
- Further workup revealed hemosiderinuria, low haptoglobin, and positive IIb/IIIa antibodies, concerning for immune thrombocytopenic purpura
- Labs were repeated 1 month following discharge and he was continued on steroids for a total of 48-days with taper
- He was seen in office with resolution of his thrombocytopenia and presumed alcoholic hepatitis, with a total bilirubin of 1.9 mg/dL

Results

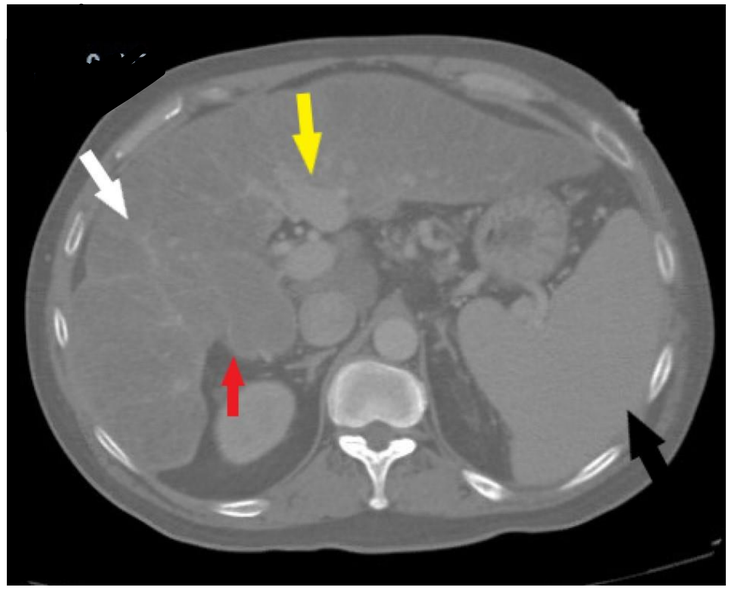

Figure 1. CT of the Abdomen and Pelvis with IV Contrast. Sagittal views of the abdomen demonstrating extensive liver nodularity (white) indicative of cirrhotic disease, enlarged portal veins (yellow) and splenomegaly (black). Gallbladder is thickened with outer wall haziness (red) possibly indicative of inflammation or adjacent hepatic disease.

Test Name	Reading	Reference Range
WBC	5.4 x10^3/mm^3	4.5-11
Hgb	11.5 g/dL	13.5-17.5
Plt	87 K/mm^3	140-440
INR	1.7	
PT	19.9 sec	12.2-14.9
PTT	37.8 sec	21.3-35.1
HIT Ab	0.239 OD	0-0.4
Haptoglobin	<10 mg/dL	23-355
Fibrinogen	280 mg/dL	183-503
U Hemosiderin	+ internal/external granules	

Table 1. Complete Blood Count and Hemolytic Workup

Results (continued)

Test Name	Reading	Reference Range
Na	132 mEq/L	135-145
T Bili	55.2 mg/dL	0.3-1.1
D Bili	31.80 mg/dL	0-0.2
T Protein	4.9 g/dL	6.4-8.4
Albumin	3.3 g/dL	3.5-5.7
ALP	226 U/L	34-104
AST	156 U/L	13-39
ALT	86 U/L	7-52
LDH	665 U/L	140-271
Lipase	724 U/L	11-82
Hepatitis Panel	Non-reactive	
Actin Smooth Muscle Ab	6 units	0-19
IgG	1133mg/dL	603-1613
M2 Mitochondrial Ab	<20 units	0-20
ANA	Negative	
Acetaminophen level	<10 mcg/mL	<10 mcg/mL

Table 2. Additional Laboratory Studies

Discussion

- Our patient was treated for immune thrombocytopenic purpura and alcoholic hepatitis with prednisolone
- His bilirubin and platelets improved with this treatment at dosing of 1 mg/kg, which is the regimen for immune thrombocytopenic purpura, albeit at one-half of the suggested duration
- Although our patient did not meet full criteria for alcoholic hepatitis, he responded well to steroids
- Due to the complexity of his presentation, determining the optimal management for this patient was difficult
- It is important to consider the broad differentials of thrombocytopenia and recognize there may be overlapping etiologies of deranged liver enzymes.

References

1. Sharma P, Arora A. Clinical presentation of alcoholic liver disease and non-alcoholic fatty liver disease: spectrum and diagnosis. Transl Gastroenterol Hepatol. 2020 Apr 5;5:19.
2. Naveau S, Giraud V, Borotto E, et al. Excess weight risk factor for alcoholic liver disease. Hepatology. 1997 Jan;25(1):108-11.
3. Patel R, Mueller M. Alcoholic Liver Disease. 2022 Jan 19. In: StatPearls [Internet]. Treasure Island (FL): StatPearls Publishing; 2022 Jan.
4. Gordon H. Detection of alcoholic liver disease. World J Gastroenterol. 2001 Jun;7(3):297-302.
5. Ogasawara F, Fusegawa H, Haruki Y, et al. Platelet activation in patients with alcoholic liver disease. Tokai J Exp Clin Med. 2005 Apr;30(1):41-8.
6. Cines DB, Blanchette VS. Immune thrombocytopenic purpura. N Engl J Med. 2002 Mar 28;346(13):995-1008.
7. Wada N, Uojima H, Satoh T, et al. Impact of Anti-GPIIb/IIIa Antibody-Producing B Cells as a Predictor of the Response to Lusutrombopag in Thrombocytopenic Patients with Liver Disease. Dig Dis. 2021;39(3):234-242. Aug 6.