A Case of Seronegative or Atypical Autoimmune Hepatitis

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Introduction

Autoimmune hepatitis (AIH) can occur in all age groups and are more common in women. Presenting symptoms are often nonspecific, and can include fatigue, anorexia, nausea, jaundice, and pruritis. For some patients, it is first diagnosed in the setting of acute hepatitis. For many others, it can progress insidiously and may not be diagnosed until the stages of chronic hepatitis or cirrhosis.

Case Presentation

HPI:

A 61 year old, previously healthy male presents with nausea, abdominal pain, loss of appetite, and jaundice for approximately two weeks.

Medications:
- Multivitamin

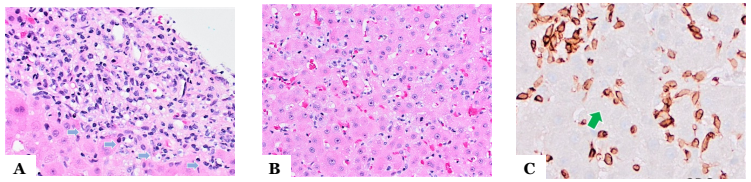
Social History:
- Drinks 4 standard alcoholic drinks per week
- Works as a marine contractor

Initial Labs:
- *CBC*: WBC 5.02, Hgb 15.5, plt 186
- *BMP:* Na 138, K 4.1, Cl 102, bicarb 27, BUN 13, Cr 1.3
- *LFTs:* AST 1687, ALT 2891, Alk phos 189, Tbili 17.4, lipase 93

Imaging:
- CT abdomen: Edematous changes in porta hepatis. No evidence of biliary or pancreatic duct dilation.
- Hepatic duplex study: Normal exam.

Liver work-up:
- *Viral:* Hepatitis A, B, C, and E are all negative for active disease. EBV, CMV, HIV, VZV, and HSV were all negative as well.
- *Antibodies:* ANA, Anti-SMA, Anti-LKM1, Anti-alpha-1-antitrypsin, ANCA, Anti-F-actin, and IgG were all within normal range.
- *Other:* Ceruloplasmin and acetaminophen levels were within normal range.

Histology



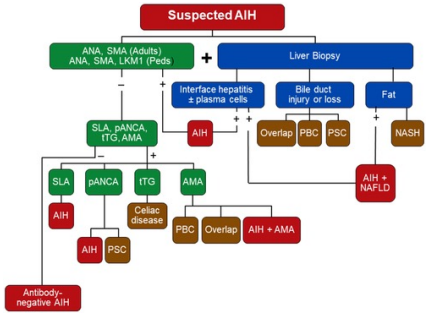
A. Infiltrating cells in the portal tract were predominantly lymphocytes with occasional neutrophils and rare eosinophils. Arrows point to active interface inflammation.
B. Within the lobules, there were prominent sinusoidal lymphocytosis and occasional apoptotic hepatocytes.
C. Infiltrating lymphocytes were predominantly CD3 positive T-cells.

The differential diagnosis based on the histologic findings include viral infection, drug reaction, or autoimmune reactions. In situ hybridization for EBV virus encoded RNA (EBER) and adenovirus immunostaining were negative.

Discussion

- This patient's case was presented at pathology conference, and he was diagnosed with atypical autoimmune hepatitis (AIH).
- AIH is typically diagnosed based on a combination of histological changes, laboratory findings, and the presence of associated autoantibodies.
- There are cases of seronegative AIH, which is much more difficult to diagnose.
- There are scoring systems, such as the Revised Original Pretreatment Scoring System, that can help determine the likelihood of AIH in more challenging cases.
- For some asymptomatic patients with minimal inflammation, pharmacologic treatment can be deferred, but they should be monitored closely to prevent progression to fibrosis or cirrhosis.
- First-line therapy for AIH is corticosteroids alone or in combination with azathioprine.
- For refractory or severe cases with liver decompensation, liver transplantation can be considered.

Diagnosis Flowchart



Source: Reference 1 below.

Learning Points

- In patients who present with severely elevated liver enzymes, it is important to consider AIH even with negative autoimmune markers and to perform a liver biopsy to aid in diagnosis.
- Although serum antibodies are usually present in AIH, it is possible for patients to develop atypical, seronegative AIH.

References

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