Granulomatous Hepatitis: The Search For A Culprit

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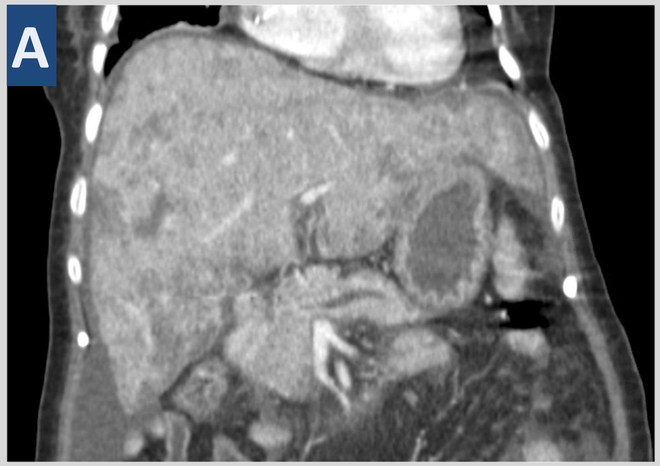
INTRODUCTION

- **Hepatic granulomas** are found in **2-10%** of liver biopsies
- Granulomatous hepatitis (GH) has numerous etiologies and is often associated with an underlying systemic disease
- **We present a case of GH after extensive testing for liver disease returned normal**

CASE DESCRIPTION

- A 53-year-old Caucasian female with a history of obesity presented with 4 days of right upper quadrant (RUQ) **abdominal pain**, **jaundice**, **nausea**, **pale stools** and **dark urine**
- She was **raised on a farm** with animals
- Her mother died of an **unknown liver disease**
- Liver enzyme tests: **AST 258** U/L, **ALT 236** U/L, **ALP 631** U/L, **T. bili** 5.5 mg/dL and **D. bili** 3.2 mg/dL
- Comprehensive testing for liver disease was unremarkable
- CT scan revealed **hepatomegaly** and MRCP showed hepatomegaly with **diffuse hepatic steatosis**
- **Atorvastatin** was discontinued
- Patient had **improvement in her liver enzymes**
- She was **discharged home** after 6 days and scheduled for an outpatient liver biopsy
- She **returned** to the hospital **5 days later** with similar symptoms, persistently elevated alk phos and an **increase in T. bili to 8.5** mg/dL (D. bili 5.5 mg/dL)
- She underwent **EUS-guided liver biopsy** which revealed **granulomatous hepatitis**
- A thorough investigation was performed to assess the underlying cause
- The patient was discharged home in stable condition while awaiting results of reference labs



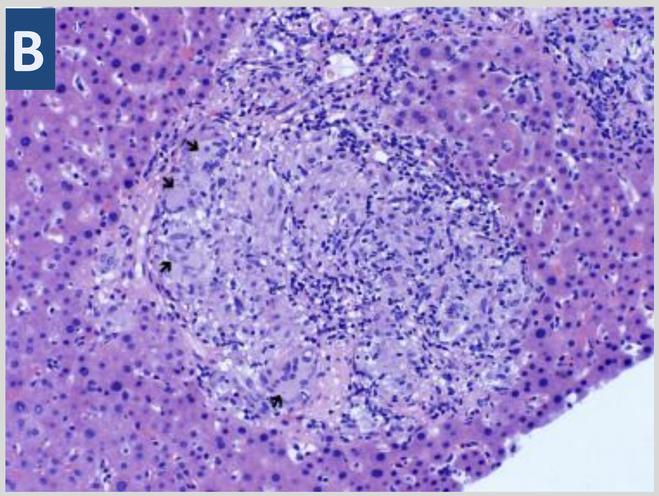


FIGURE LEGEND

- **Figure A:** CT abdomen without contrast may reveal heterogeneous hepatic attenuation with lobulated hepatic contour in keeping with severe inflammatory and fibrotic changes
- **Figure B:** Liver biopsy with histopathological examination may reveal noncaseating epithelioid granulomas in the portal areas and liver parenchyma, multinucleated giant cells with reactive fibrosis and mild interface hepatitis. Biliary destruction with lymphocytic cholangitis may also be seen

DISCUSSION

- Granulomatous hepatitis (GH) has many causes including:
  - Infectious (i.e. bacterial, fungal, viral, parasitic)
  - Autoimmune (i.e. primary biliary cholangitis [PBC])
  - Drug-induced (i.e. sulfonylureas, allopurinol)
  - Metals (i.e. beryllium, copper, gold)
  - Extrahepatic malignancy
  - Idiopathic
- The most common etiologies of GH: **sarcoidosis**, **mycobacterial infection**, **PBC** and **drug-induced GH**
- GH may be **asymptomatic**, can present with **hepatobiliary symptoms** or with **constitutional symptoms** from systemic disease
- Imaging may be normal or reveal hepatomegaly (as in our case)
- **Liver biopsy** is the best diagnostic tool for GH
- Symptomatic and idiopathic GH often responds to **corticosteroids** once infection has been excluded
- **Methotrexate** or **infliximab** have also been used
- **Offending agents** should be discontinued
- It is speculated that our case may have been due to exposure to a zoonotic infection
- **Complications** of GH: fibrosis, portal hypertension and cirrhosis

CONCLUSION

➢ **GH should be considered in a patient with RUQ abdominal pain, fever, hepatomegaly and elevated LFTs in the appropriate clinical context.**

REFERENCES

- Saad E, Agab M, Ozcekirdek EC, Awadelkarim A, Idris I. The Diagnostic Dilemma of Acute Granulomatous Hepatitis in a Patient With Crohn's Disease: A Case Report and Review of Literature. *Journal of Investigative Medicine High Impact Case Reports*. 2022;10. doi:10.1177/23247096211069764
- Doppalapudi H, Markus JT, Parekh U. Granulomatous Hepatitis. [Updated 2022 Jul 10]. In: StatPearls [Internet]. Treasure Island (FL): StatPearls Publishing; 2022 Jan-. Available from: https://www.ncbi.nlm.nih.gov/books/NBK564315/
- Neelam, Anudeep MD1; Saxon, Grace Moxley1; Nasir, Aqsa MBBS2; Krakow, David MD1. S2681 Granulomatous Hepatitis: An Uncommon Presentation of Lymphoma. The American Journal of Gastroenterology: October 2020 - Volume 115 - Issue - p S1404 doi: 10.14309/01.ajg.0000712772.92467.cc
- Huang J, Lin S, Wan B, Zhu Y. A Systematic Literature Review of Syphilitic Hepatitis in Adults. J Clin Transl Hepatol. 2018 Sep 28;6(3):306-309. doi: 10.14218/JCTH.2018.00003. Epub 2018 May 4. PMID: 30271743; PMCID: PMC6160304