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Granulomatous Hepatitis: A Rare Case Report

AMIN AA[a], MONDAL SK[b], ULLAH ME[c]

Abstract

Hepatic granulomas are found in about 3 to 10% of liver biopsies. In the liver, granulomas often merely serve as the morphologic clue to some underlying systemic process while liver function is well preserved. In approximately 15% of cases no aetiology can be established despite extensive investigations. Here we report a case of 43 years old lady with history of right upper quadrant pain with occasional fever and vomiting which was attributed to her gall bladder stones. Her liver function tests(LFT), hematological, biochemical test results were normal and all the viral markers were negative. During laparoscopic cholecystectomy, the liver was found to be studded with numerous grayish white small nodules. Liver biopsy was done which revealed non-caseating granulomatous hepatitis.

Key words: Granulomatous hepatitis, liver biopsy

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Introduction

Granulomatous hepatitis is a multifactorial infiltrative liver disorder with or without additional hepatic inflammation and fibrosis. The term "granulomatous hepatitis" is often used, but the condition is not a true hepatitis. Epithelioid granulomas have been reported in about 3–10% of unselected liver biopsies[1], with numerous underlying aetiologies described. There may be insignificant incidental findings, but more often they reflect clinically relevant disease —usually a systemic disorder rather than primary liver disease. A specific aetiological agent cannot be identified in approximately 15% of cases despite serological, immunological, microbiological, and radiological investigations leading to a diagnosis of 'idiopathic granulomatous hepatitis'. A few such patients have a syndrome of recurrent fevers, myalgias, fatigue and other systemic symptoms.

Case report

A 43-year-old diabetic woman was admitted in our hospital with right upper abdominal pain and vomiting with low grade fever and sonographic evidence of gall bladder stone. She had the history of dyspepsia and persistent dull ache in upper abdomen for 3 months. During this period, she also had occasional fever and vomiting. But there were no history of jaundice or any respiratory symptoms and her bowel and bladder habit were also normal. Her past medical history includes pulmonary tuberculosis 1½ years back for which she had received full 6 months course of anti TB chemotherapy.

On examination, her right hypochondrium was slightly tender and liver was palpable about 2 cm from costal margin without any clinical stigmata of chronic liver disease. Murphy's sign was positive. Her chest was clear, vital signs were normal and there were no other abnormal clinical findings. She was diagnosed as a case of acute on chronic cholecystitis.

Her LFT results were normal. Findings of a full blood examination and urea, electrolytes, sugar and creatinine levels were all within normal limits. Results of serological tests for hepatitis A, B and C were negative. USG of abdomen revealed mild hepatomegaly with cholelithiasis.

We planned for laparoscopic cholecystectomy. During laparoscopy, the liver was found to be enlarged and it's surface was studded with numerous grayish white small nodules (Fig 1). Gall bladder wall thickness was normal and there was no pericystic adhesion. GB lumen contained multiple small, soft, black stones. Rest of the abdominal organs and the peritoneum looked normal and there was no ascites either. Liver tissue was taken for biopsy.

Histopathology revealed non-caseating granulomatous reaction with aggregates of epithelioid histiocytes and Langhans giant cells. Some of the granulomas are

1. Prof. Md. Abdullah -Al –Amin, Head of the Department, Surgery & MISC, BIRDEM & Ibrahim Medical College, Dhaka, Bangladesh.
2. Dr. Samiron Kumar Mondal, Assisstant Professor, Dept of Surgery & MISC BIRDEM & Ibrahim Medical College, Dhaka, Bangladesh.
3. Dr. Mahmud Ekram Ullah, Registrar, Dept of Surgery & MISC, BIRDEM & Ibrahim Medical College, Dhaka, Bangladesh.

Address of Correspondence: Prof. Md. Abdullah- Al –Amin, Email: drabdullah_alamin@yahoo.com

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coalescing and some are discrete amidst infiltration by chronic inflammatory cells. The bile ducts were all intact and no evidence of malignancy was seen (Fig 2). GB wall showed chronic cholecystitis.

Postoperative recovery was uneventful and she was discharged on 2nd POD.

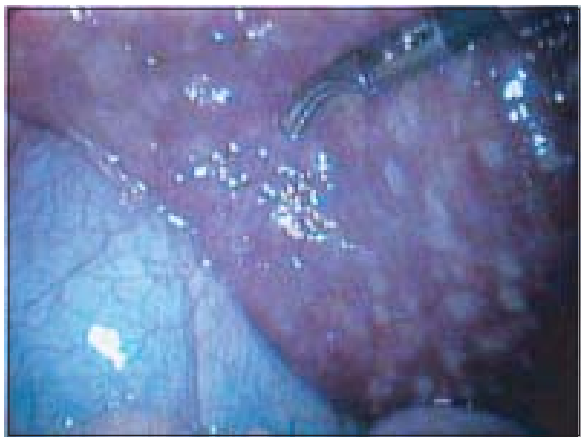

Fig.-1: *Liver surface studded with numerous grayish white small nodules (laparoscopic view)*

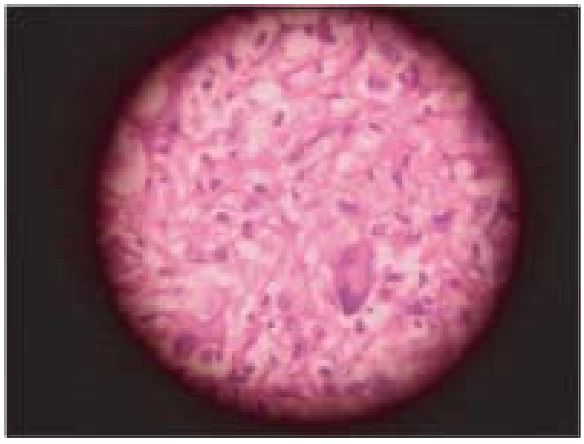

Fig -2: *Non-caseating hepatic granuloma (microscopic view)*

Discussion

Granulomatous hepatitis is an uncommon condition with a lengthy list of possible causes[2]. Infectious disorders are the most important (TB, Viral, Parasitic, fungal) and sarcoidosis is common among noninfectious causes. A variety of drugs can be responsible (eg, quinidine, sulfonamides, allopurinol). It may also be found in primary liver disease like primary biliary cirrhosis and auto immune hepatitis. Other rare causes include non-Hodgkin's lymphoma, polymyalgia rheumatica, juvenile chronic arthritis, graft versus host disease etc. In some cases no etiology can be established and thus labelled "idiopathic". These patients are typically middle aged women who have an excellent prognosis[3].

In the liver, granulomas often incite little or no hepatocullular reaction and merely serve as the morphologic clue to some underlying systemic process; and liver function is well preserved like that in our patient.

In most situations, liver function test results are only mildly deranged, usually with a disproportionate elevation of alkaline phosphatase. Bilirubin levels are typically normal or only mildly elevated, unless concomitant hepatocellular injury coexists[2].

Histological examination of liver tissue provides crucial information in the differential diagnosis of hepatic granulomas[4]. However, the morphologic pattern is often nonspecific and the diagnosis should be pursued with appropriate studies (eg, cultures, skin tests, laboratory and x-ray studies, and other tissue specimens) which had been done in our patient.

Hepatic granulomas of infective or drug etiology regress completely after appropriate therapy. Without an etiologic diagnosis, it is generally best to follow the patient rather than blindly treat with antibiotics or other therapies. Corticosteroids may be helpful in idiopathic group but should be given only if TB and other infective disorders can confidently be excluded[2] particularly in the endemic area.

In our patient, the biopsy did not show bile duct destruction characteristic of primary biliary cirrhosis, or any evidence of malignancy. The patient was not taking any offending drugs. Histological appearance and distribution of granulomas was not consistent either with the diagnosis of hepatic sarcoidosis or with TB. Ziehl-Neelsen stain for AFB were negative. Moreover, she did not have any constitutional features of TB and her chest was normal along with negative MT test and normal ESR. In most cases, TB involvement of the liver occurs in disseminated TB. However, Negative culture result / PCR on liver biopsy specimen could have confirmed it[5,6]. Perhaps thereby, our patient fell into the idiopathic category.

Conclusion

A wide variety of underlying conditions can cause granulomatous hepatitis with resulting prognostic and therapeutic implications. The idiopathic subgroup does very well though the exact cause remains undetermined. Steroid therapy is beneficial in some cases but should be given only after excluding potential infective causes.

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