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Case Series

Hepatitis A and cryptogenic cirrhosis of liver: a case series

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ABSTRACT

We are discussing a case series of 12 patients that presented with either compensated or decompensated chronic liver disease that were labelled as cryptogenic cirrhosis of liver after ruling out most of the known causes of chronic liver disease. They were found to be positive for hepatitis A IgG antibody. Cryptogenic cirrhosis has been attributed to various possible causes like non- alcoholic fatty liver disease, various metabolic disorders or occult viral infections. Hepatitis A virus is known to cause acute viral hepatitis. Presence of hepatitis A IgG antibodies in serum of patients with chronic liver disease may act as a clue to fill the voids in our understanding of cryptogenic cirrhosis of liver. Possibility of hepatitis A and various other viruses as potential causes of chronic liver disease needs to be explored.

Keywords: Hepatitis A, Cryptogenic cirrhosis, Feco-oral route, Chronic liver disease

INTRODUCTION

Cryptogenic cirrhosis of liver is defined as cirrhosis with unknown etiology after ruling out known causes.[1] They have been thought to be associated with occult viral infections, NASH, ethanol intake, autoimmune hepatitis, occult biliary disease, hepatic vascular disease, celiac disease, mitochondriopathies, familial Mediterranean fever, systemic lupus erythematosus, Alstrom syndrome, apolipoprotein B defects with low low-density-lipoprotein cholesterol, short telomere syndromes, keratin 18 mutations, and glutathione S-transferase mutations.[2]

Hepatitis A is a common cause of viral hepatitis and is primarily spread by feco-oral route.[3] Hepatitis A is a non-enveloped icosahedral virus which is commonly known to cause acute hepatitis but its role in causing chronic hepatitis has not been established.[4] While hepatitis E has been reported in some prior studies to be associated with chronic liver disease, but this has not been reported for hepatitis A.[5] Here we presented a series of cases with cirrhosis of unknown etiology which are seropositive for hepatitis A.

CASE SERIES

A series of 12 patients of different age groups presented in medicine department of Sri Guru Ramdas institute of medical sciences and research, Amritsar, they were diagnosed to be having chronic liver disease based on clinical and lab features and they were screened for different known causes of chronic liver disease like hepatitis B, hepatitis C, autoimmune etiologies, Wilson's disease, haemochromatosis and alcohol consumption. After ruling out most of the known causes and before labeling them as cryptogenic cirrhosis of liver, they were screened for hepatitis A IgG antibodies and hepatitis E. They were found to be positive for hepatitis A IgG. All of them had history of acute liver illness in past. Details of cases are mentioned in Table 1.

Table 1: Presenting features.

Clinical presentation	N	Percentage (%)
Jaundice	3	25
ascites	5	41.6
Esophageal varices	5	41.6
Hepatic encephalopathy	3	25
Hepatorenal Syndrome	3	25
Low prothrombin index	8	66.6
Coarsened echotexture on ultrasound	12	100
Albumin: globulin reversal	12	100
Raised IgM hepatitis A titres	12	100
Compensated cirrhosis	3	25
Decompensated cirrhosis	9	75

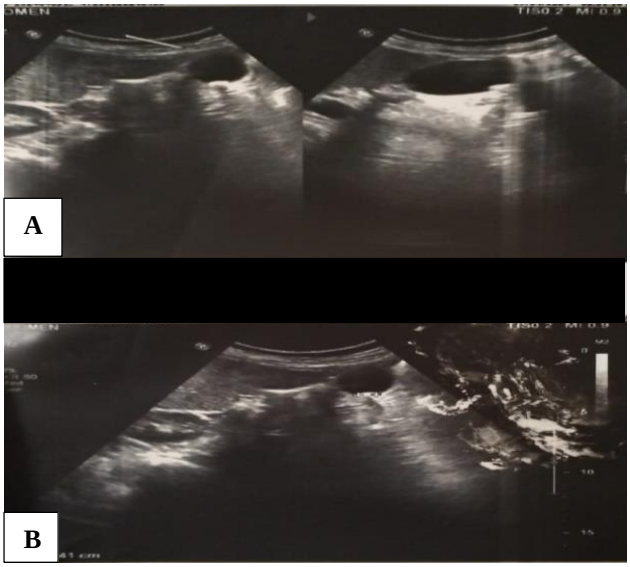

Figure 1 (A and B): Ultrasound abdomen image of patient with cryptogenic cirrhosis of liver.

DISCUSSION

Number of cryptogenic cirrhosis patients is decreasing ever since discovery of hepatitis B and hepatitis C virus and with newer diagnostic methods. A vast majority of patients still are classified as cryptogenic cirrhosis of liver. These patients have worse outcomes when compared to cirrhosis with known etiology.[6]

Hepatitis A is a non-enveloped virus, resistant to heat, acid and ether. It has an incubation period of 4 weeks and replication is mainly limited to liver. Hepatitis A virus is a disease of low socioeconomic status and poor sanitation, spread mainly by feco-oral route.[7] Its presentation may range from mild hepatitis to fulminant hepatic failure. Rarely, it may present as prolonged cholestasis which may last from few weeks to few months. However, its role in causing chronic liver disease has not been established.[8] IgM and IgA antibodies are detectable during acute phase and remain positive for 3 months. IgG antibodies appear after acute phase is over and represent prior history of hepatitis A infection. Most of the patients recover without sequalae and a small proportion of old and debilitated patients may progress to severe hepatitis, however case fatality rate is low (<0.1%).[9] Presence of hepatitis A IgG antibodies in serum of patients with chronic liver disease may act as a clue to fill the voids in our understanding of cryptogenic cirrhosis of liver. However, there are valid reasons to believe that extensive research is required to establish it as a cause of cryptogenic cirrhosis of liver.

There can be many causes of cirrhosis of liver and an extensive workup is required to label a patient as having cryptogenic cirrhosis of liver. Establishing cause of cirrhosis may result in better outcomes.[10] Many cases of cryptogenic cirrhosis show chronic viral hepatitis like pattern, however routine workup for viral hepatitis turns out to be negative. These could be due to unusual viruses who's potential to cause chronic liver disease has not been established like hepatitis A and E viruses.[11]

Patients were managed according to presentation after classifying them into compensated and decompensated cirrhosis of liver. Respective complications like ascites, encephalopathy, hepatorenal and upper gastrointestinal bleed were managed accordingly.

CONCLUSION

Despite advances in knowledge and diagnostic criteria, cryptogenic cirrhosis remains a challenge. Occult viral infections may fill those voids in our knowledge of cryptogenic cirrhosis of liver. Extensive research is needed to establish these as causes of chronic liver disease.

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