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Original Research Paper

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A RARE CASE OF COMPLICATED LIVER ABSCESS WITH MIDDLE HEPATIC VEIN THROMBOSIS: A CASE REPORT AND REVIEW OF LITERATURE

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ABSTRACT In developing countries Amoebic liver abscess is commonly encountered disease and it's also the commonest extraintestinal manifestation of Entamoeba histolytica infection. Usual complication of Amoebic liver abscess arises due to collection of pus in various cavities, like in peritoneal cavity following perforation, in the pleural cavity which is known as empyema thoracis, and rarely it is complicated by life threatening conditions such as venous extension of the disease involving the hepatic veins and IVC, with only few cases reported.
Here we describe a case of amoebic liver abscess extending across middle hepatic vein.

KEYWORDS : Liver Abscess, Hepatic Vein Thrombosis

INTRODUCTION

In tropical countries common cause of right upper quadrant pain is Amebic liver abscess, if the presenting clinical features are characteristic and with the help of ultrasonography it can be easily diagnosed at the time of admission. However, it can be fatal disease if it remains untreated and develops complications. These complications can arise from rupture of the abscess into the adjacent cavities i.e., peritoneal, pleural, pericardial and rarely into the GI tract [1]. One of the rare complications is vascular extension leading to hepatic vein, Inferior Vena Cava (IVC) and portal vein, thrombosis [2].

Budd Chiari syndrome is defined as obstruction to hepatic veins that drain the liver. This obstruction can be due to thrombotic and non-thrombotic causes. It presents as a triad of abdominal pain, fever and ascites. Here we describe a case of liver abscess which presented to us with the triad mentioned above and on further evaluation found out to have middle hepatic vein thrombosis.

Case Report

A male patient aged 56 years presented to emergency department with fever and severe pain in the right upper quadrant, abdominal distension and bilateral lower limb swelling for 6-7 days. On examination the liver was enlarged with tenderness in right upper quadrant and signs of moderate ascites were present. A diagnosis of liver abscess was suspected on the basis of presenting complaints and examination. On ultrasonography right lobe of liver showed a hypoechoic heterogenous lesion measuring 101.5ml, B/L pleural effusion right more than left and mild ascites. All routine investigations were done, which revealed the following findings.

Total bilirubin	1.65 mg/dl
Direct bilirubin	1.12 mg/dl
Indirect bilirubin	0.53 mg/dl
SGOT	176.60 U/L
SGPT	100 U/L
Alkaline Phosphate	1076 U/L
TLC	22.49 cell/cu.mm
ESR	122

A triple phase CT whole abdomen showed a multilobulated lesion measuring ~ 8.4 x 7.6 x 8 cm with peripheral enhancement in the in segment VII and VIII of right lobe of liver, patchy wedge shaped hypodensity in rt lobe s/o infarction. On post contrast study complete non filling of middle hepatic vein, finding suggestive of middle hepatic vein thrombosis (Fig. 1-3). All these finding led to the consideration of Liver abscess which was complicated by the middle hepatic vein thrombosis. An ultrasound guided percutaneous aspiration was performed and around 200 ml of pus was aspirated and sent for serology, which was positive for Entamoeba histolytica. Patient was initiated on Injection Metronidazole 800 mg thrice a day and I/V for 2week, diloxanide furoate, 500 mg orally thrice a day for 10 days along with symptomatic treatment for fever and pain. Patient was started on anticoagulant therapy. Patient symptoms improved and he was better at the end of 2 weeks and reduction in the size of abscess was documented on follow up ultrasound scan. The patient was discharged in good condition and lost to follow up. In our case, an amoebic liver abscess showed unusual complications of venous extension of abscess with thrombus formation.

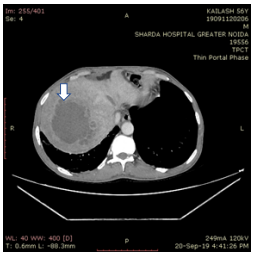

Fig 1: liver abscess in right lobe of liver.

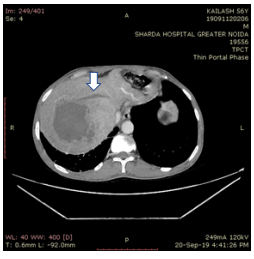

Fig 2: Middle hepatic vein thrombosis.

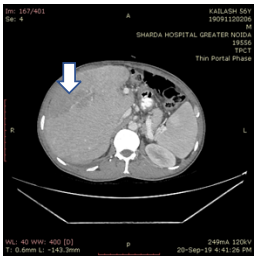

Fig 3: Infarction in right lobe of liver.

DISCUSSION

Amebiasis is known to causes intestinal and extra intestinal complications, amoebic liver abscess being the commonest among extraintestinal manifestation. Which is caused by Entamoeba histolytica and spread to liver through hematogenous route, and is endemic in India. The 3-9% of all cases of amebiasis show liver involvement with a liver abscess (3,4). It more commonly affects right lobe than the left lobe of liver (5). Alcohol has been described as the single most predisposing factor for ALA (6). Numerous complications have been reported with amebic liver abscess, Usual one being pleuropulmonary, intraperitoneal rupture, subhepatic effusion, subphrenic abscess and jaundice (6,7). Hepatic vein thrombosis and IVC thrombosis have been reported as the rare vascular complication (8-16). Another rare entity pseudoaneurysm of the hepatic artery and extension of thrombus into right atrium has also been reported (12,16). In present case, amoebic liver abscess in segment VII and VIII of right lobe of liver showed direct extension of abscess into MHV with thrombosis. No extension into right atrium was seen. The cause of venous thrombosis in ALA is not clear. Possible mechanism can be external mechanical compression and predisposed thrombotic state due to inflammatory process associated with abscess (8,13,16). If there's any suspicion about the preexisting thrombogenic state, that shall be ruled out by evaluating the coagulation profile. The possible association between hypercomplemenetemia and IVC thrombosis in patient of ALA has also been described with increased tendency for thrombosis related to complement proteins. Complement and coagulation system act together and enhance each other's effect which are crucial for defence against infective agents (14). In present case the Amoebic liver abscess was in close proximity to Middle hepatic vein and within the wall of amoebic liver abscess ongoing inflammatory process might have spread and lead to hepatic vein wall injury, which further followed thrombosis of the middle hepatic vein.

CONCLUSION

Hepatic vein thrombosis though rare complication of liver abscess but should always be kept in mind when a patient of liver abscess presents with ascites and pedal edema. Prompt diagnosis and treatment can prevent further complications.

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