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INTRAHEPATIC CHOLANGIOCARCINOMA AS NON-RESOLVING LIVER ABSCESS- A CASE REPORT

Hepatobiliary Surgery

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ABSTRACT

Malignant liver lesion as liver abscess and presenting with fever, is mainly described in patients with colorectal liver metastasis, Neuroendocrine liver metastasis. Primary liver tumors such as hepatocellular carcinoma or intrahepatic cholangiocarcinoma presenting as non-resolving liver abscess is extremely uncommon and carries a dismal prognosis. We present a rare case of non-resolving liver abscess as a presenting manifestation of intrahepatic cholangiocarcinoma.

KEYWORDS

Liver Abscess, Intrahepatic Cholangiocarcinoma, Colorectal Liver Metastasis, Neuroendocrine Liver Metastasis

INTRODUCTION

Cholangiocarcinoma belongs to a group of diverse malignancies which can emerge from any level in the biliary tree. [1]Intra-hepatic Cholangiocarcinoma is the second most common malignancy arising from the liver and accounts for 10% of all Cholangiocarcinoma. [2,3]A minority of only about 15% present with a resectable disease with a median survival of less than 3 years.Complete surgical resection remains the only option for cure with an estimated median survival ranging from 27 to 36 months.[3–7] the major risk factors of Cholangiocarcinoma includes primary sclerosing cholangitis (PSC), primary biliary cirrhosis (PBC), parasitic infections, HBV,HCV, choledochal cyst. [8,9] Malignancy masquerading as liver abscess, and presenting with fever, is mainly described in patients with colorectal cancers with liver metastasis and Neuroendocrine tumors.[10] Primary liver tumors such as hepatocellular carcinoma or intrahepatic Cholangiocarcinoma presenting as non-resolving liver abscess is extremely uncommon and carries a dismal prognosis. We present a rare case of non-resolving liver abscess as a presenting manifestation of intrahepatic Cholangiocarcinoma.

Case Report:

A 51-Year-old male, presented to us with epigastric pain abdomen for 1 month with multiple comorbidities (diabetes, hypertension and Coronary artery disease).Patient was also known alcoholic and smoker for 20 years There was no History of jaundice and Upper GI or Lower GI bleed. The patient had undergone Percutaneous Drainage for liver abscess 1 month ago. Upon non-resolving of the liver abscess the patient was referred to our institution. Physical examination revealed ECOG 1, no pallor, no icterus and no palpable lymphadenopathy. Patient's vitals were stable at the time of presentation to our department. Per abdomen examination revealed mild epigastric tenderness and no organomegaly.

Blood investigation parameters were as follows- CBC: Hb-11gm/dl, Total count 9,000cells/microliters, platelets-1.9 lakhs, LFT: total bilirubin-0.9mg/dl, direct bilirubin-0.4mg/dl, SGOT-98u/l, SGPT-97u/l, ALP-223u/l, RFT: urea-15mg/dl, creatinine-0.7mg/dl, sodium-135mmol/l, potassium-3.8mmol/l, PT/INR: 15.1/1.6. Viral markers for HBV, HCV and HIV were found to be negative. His USG abdomen revealed ill-defined isoechoic lesion measuring about 9.1x6 cm in left lobe of liver and altered echo texture in the right lobe liver. Upper GI endoscopy and Colonoscopy: Normal study. Tumour marker CA 19-9:90.88 u/ ml. Portal vein doppler- no evidence of portal hypertension.

Abdominal CECT(contrast Enhanced Computer Tomography)triple phase revealed Ill-defined heterogeneous lesion measuring about 9.7 x 6.4 x7.1 cm in segments III and IV of left lobe liver. Peripheral arterial enhancement was observed during the early phase, with persistent enhancement during the delayed phase, and progressive centripetal filling. IHBRD(intra hepatic biliary dilatation) in segments II and III.Filling defect were noted in segmental branch of left portal vein, likely reflecting thrombosis. Few tiny gall bladder calculi were also seen. MRI abdomen/ MRCP(Magnetic resonance cholangiopancreaticography) was done which exhibited T 1 hypointense and T2 hyperintense necrotic areas in segment 4a 4b with extension into segment 3 and a size of 7.7x7x6 cm with capsular retraction. The lesion was also noted infiltrating left hepatic duct with IHBRD. There was minimal extension into segment III. The lesion completely infiltrated and encased distal portion of left hepatic duct and distal left portal vein, confirming the possibility of IHCC(Intra hepatic cholangiocarcinoma**).** PET-CT (**Positron Emission Tomography**) was done. FDG(18F-Fluorodeoxyglucose) uptake seen in the intra-hepatic mass lesion with no extra-hepatic or lymph nodal spread and no evidence of distant metastasis.

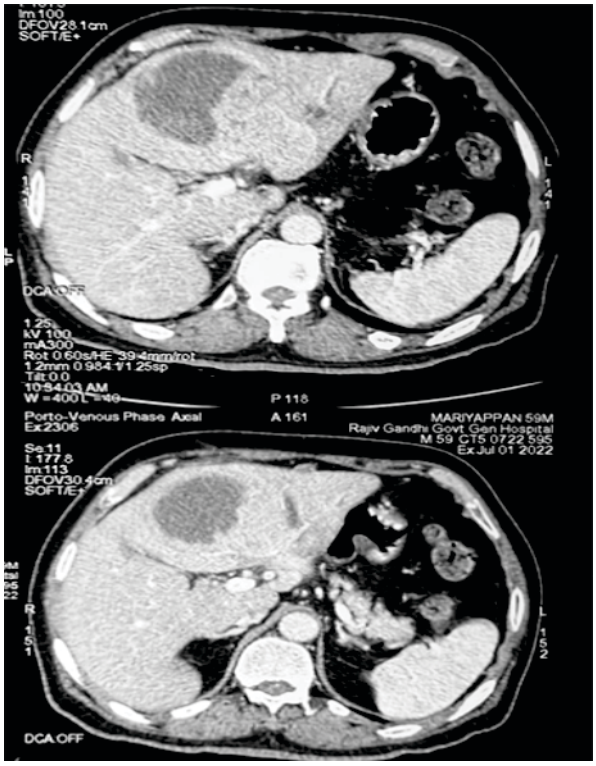

Figure 1- Axial section of CECT abdomen

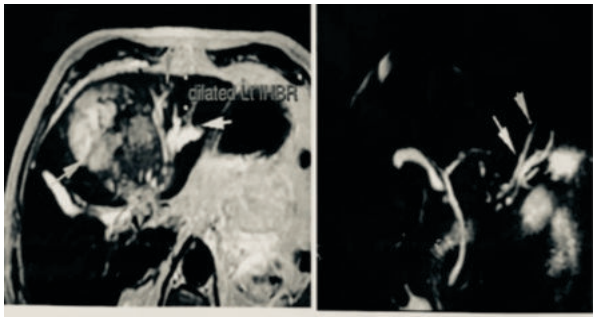

Figure 2- MRCP. Arrow pointing to dilated and crowded bile ducts.

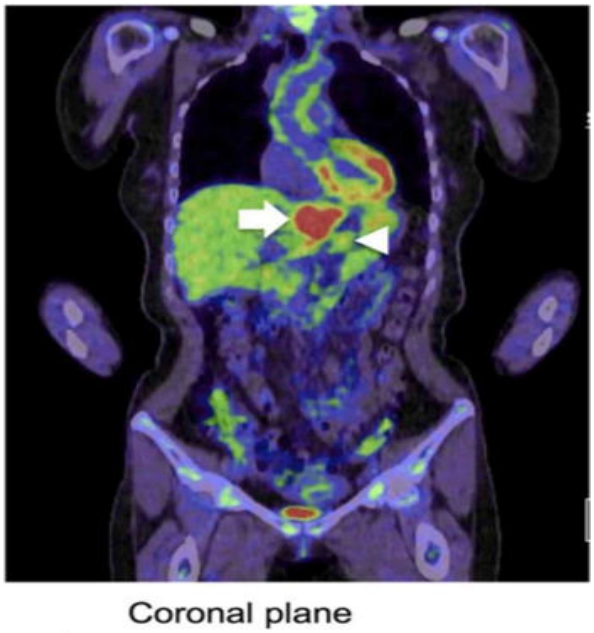

Figure 3- Coronal section of PET scan. Arrow suggestive of lesion.

The lesion was found to be resectable on the basis of imaging, thus it was planned for curative resection- Left hepatectomy with caudate lobectomy. Planned surgical intervention with diagnostic Laparoscopy revealed a lesion involving segment 3,4. Nodular liver with no evidence of peritoneal or omental metastases and no ascites. Laparotomy was planned and proceeded. Liver was firm and nodular,8x8 cm lesion occupying segment 3,4 of liver. Inflow control done by extra-fascial approach, parenchymal demarcation and transection done, stapler transection of HV done. Hence, Left Hepatectomy, caudate lobectomy with Hepato-Duodenal Lymphadenectomy was done.

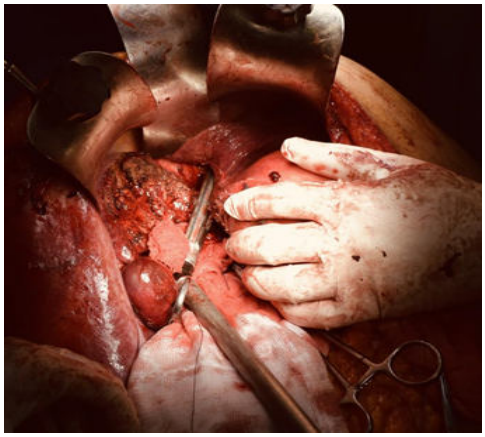

Figure 5- Stapler transection of hepatic vein

Histopathology report revealed a well differentiated intra-hepatic Cholangiocarcinoma measuring 6x7x6 cm. Pathological staging pT1b N0 Mx, LN-0/6. All margins were free from tumour. The adjacent hepatic parenchyma was found to be cirrhotic. Gall bladder showed chronic cholecystitis.

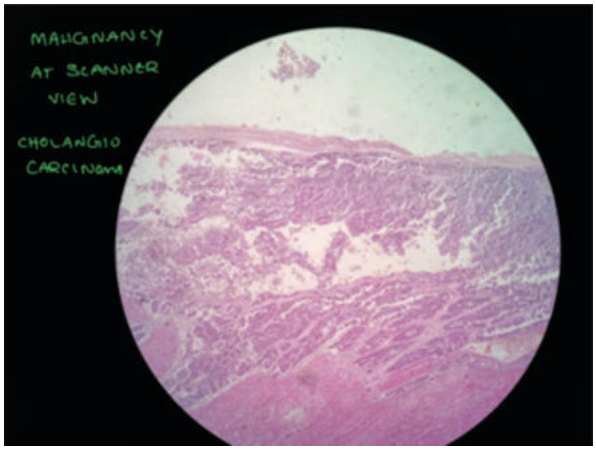

Figure 6- Histopathology

Post- operative course of the patient was uneventful. DT was removed on post-operative day 5. Gradually performance status improved and wound healed. The case was discussed in multi-disciplinary team of our institution. Policy was under regular surveillance.

DISCUSSION:

This is a rare case of an elderly male presenting with a non-resolving liver abscess. IHCC may present as liver abscess secondary to obstruction of the biliary system or obstruction at the porta hepatis due to lymph nodes or lesion itself. The presenting clinical manifestations are non-specific and may be similar to pyogenic or amoebic liver abscess thus delaying the diagnosis of malignancy.[10]

IHCC is an aggressive tumour with poor prognosis. Radical surgical resection remains the only curative treatment for IHCC with R0 resection, lymphadenectomy.

Malignancies commonly presenting as liver abscess are metastatic colorectal cancers, and neuroendocrinal tumours. IHCC should be suspected when a liver abscess is non-resolving, especially when the patient is elderly, having persistent fever with no response to multiple courses of antibiotics, persistently rising SAP trend and Elevated CA19.9 in absence of biliary obstruction. In the cirrhotic liver MRI/MRCP has increasing specificity in diagnosing IHCC compared to HCC , however, CECT has sensitivity to large lesions (> 1cm).

ICC mimicking liver abscess with liver cirrhosis represents a difficult situation. Imaging modalities such as CT scan ,MRI could also be helpful in certain cases. In patients with liver abscess without a clear etiology or cirrhotic liver needs thorough clinical and radiological evaluation. FNAC(Fine needle aspiration cytology) might be inconclusive in such cases and tumoral origin must be suspected. Diagnosis can be confirmed by histopathology in suspicious cases.

Combination of traditional clinicopathological typing with newer advances in imaging detection and molecular typing can help in providing more accurate diagnosis and treatment of IHCC. The role of ALPPS and liver transplantation in IHCC mimicking liver abscess requires further research and more clinical evidence. Amalgamation of traditional and novel treatment approaches will further improve the curative effect of IHCC.

CONCLUSIONS

ICC mimicking liver abscess with liver represents a difficult situation, Imaging modalities such as CT scan, MRI could also be helpful in certain cases

In patients with liver abscess without a clear etiology on cirrhotic liver needs thorough clinical and radiological evaluation, Fine needle aspiration cytology might be inconclusive in such cases then malignant origin must be suspected Diagnosis often confirmed by histopathology.

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