



ISSN Print: 2394-7500
ISSN Online: 2394-5869
Impact Factor: 5.2
IJAR 2018; 4(3): 189-192
www.allresearchjournal.com
Received: 27-01-2018
Accepted: 28-02-2018

Dr. Jayashri Pandya
Dept. of General Surgery,
BYL Nair Ch. Hospital,
Mumbai Central, Maharashtra,
India

Dr. Arjun Unnikrishnan
Dept. of General Surgery,
BYL Nair Ch. Hospital,
Mumbai Central, Maharashtra,
India

Correspondence
Dr. Jayashri Pandya
Dept. of General Surgery,
BYL Nair Ch. Hospital,
Mumbai Central, Maharashtra,
India

Cholangiocarcinoma mimicking liver abscess: A rare presentation

Dr. Jayashri Pandya and Dr. Arjun Unnikrishnan

Abstract

Malignancy masquerading as liver abscess is uncommon. It may present in patients with colorectal carcinoma with liver metastasis, hepatocellular carcinoma, intrahepatic cholangiocarcinoma. Liver abscess either pyogenic or amoebic is common in the tropical countries, like India. But Cholangiocarcinoma as a cause of liver abscess is rare and carries poor prognosis. [1] We present to you a case of a 67-year-old female patient who presented with liver abscess and on further investigations was diagnosed to have intrahepatic Cholangiocarcinoma.

Keywords: Liver abscess, cholangiocarcinoma, non-resolving liver abscess, intra hepatic cholangiocarcinoma

Introduction

Cholangiocarcinoma is a neoplasm, developing anywhere along the biliary tree. Age-adjusted rates of cholangiocarcinoma are reported to be highest in Hispanic and Asian populations (2.8–3.3 per 100 000) and lowest in non-Hispanic white people and black people (both 2.1 per 100 000) [2-4]. Only 10% of the tumours involve the intrahepatic bile ducts [5]. There have been few reported cases of cholangiocarcinomas presenting as liver abscess. In a study by Yin-yin Jan *et al*, cholangiocarcinoma was the cause of liver abscess in 3.3% of the patients only. [6] Liver malignancies, either primary or secondary, may form a liver abscess due to tumour necrosis followed by superadded infection or due to secondary obstruction of the biliary system by the tumour or the lymph nodes. Sherman and Robbins noted that biliary tract disease and malignancy supplanted portal vein seeding was the most common mode of bacterial entry in to the liver.

Key Messages

Intrahepatic cholangiocarcinoma presenting as a liver abscess is uncommon. Diagnosis is based on Triphasic CT abdomen, tumour markers and histopathology. Early diagnosis is important, so that appropriate treatment can be provided. Hence it is important to consider malignancy as a differential diagnosis while treating cases of non-resolving liver abscess.

Case History

A 67-year-old female patient presented with complaints of pain in the upper abdomen and yellow discoloration of sclera and high coloured urine since three weeks. Pain was localised to the right hypochondrium, mild dull aching type, intermittent and non-radiating. It was associated with intermittent fever with chills, nausea and vomiting, increased frequency of stools and bilateral lower limb swelling which was gradually progressive. There was no change in the colour of stools.

Blood investigations showed- WBC count (17,900 mm³), bilirubin levels (total bilirubin-6.1 mg/dl, direct bilirubin-2.4 mg/dl) and normal alkaline phosphatase levels (102 IU). Markers for hepatitis B and C were negative. Sonography of the abdomen revealed a hypochoic collection (14.6x11.6x11.4 cm) approximately 1000cc with moving internal echoes suggestive of liver abscess, CBD was normal (5mm) with diffuse central and peripheral IHBRD. USG guided tapping (around 800cc) of the collection was done and patient was started on third generation cephalosporins and metronidazole for a week. Fluid was purulent in nature and routine microscopy of the fluid showed plenty of pus cells. Repeat USG was performed which showed a 13x12x11 cm collection in right lobe approximately 986cc with

moving internal echoes suggestive of liver abscess, and USG guided aspiration (around 900cc) was done. 7 days later, USG showed no decrease in size of the abscess. Since there was no abatement in the frequency and intensity of her fever and leucocytosis, patient was transferred to our institute for further management.

On general examination she was febrile (temp-38.5 degrees), icteric with bilateral pitting pedal edema. Per abdomen examination revealed right hypochondriac tenderness with no organomegaly. Blood investigations revealed a WBC count (16,000 mm³), bilirubin levels (total bilirubin-14 mg/dl, direct bilirubin- 8 mg/dl), alkaline phosphatase (376 IU). USG abdomen revealed hypoechoic collection 11.4x14x10 cm in right lobe (1100 cc), liquefied with ascites, central and peripheral IHBRD, CBD normal. A pigtail was inserted in the collection under sonographic guidance. Fluid was purulent in nature. Routine microscopy of the fluid showed degenerated pus cells with plenty of neutrophils, cytology was negative for malignant cells and culture showed E.Coli. USG reassessment after 2 days did not show any significant decrease in the size of the collection and patient had persistent fever with leucocytosis. LFT of the patient showed a rising trend (Total bilirubin-17 mg/dl, Direct bilirubin-10 mg/dl, AlkPO4-700 IU). Hence a Triphasic CT scan of the abdomen was done and it (figure 1, 2, 3) revealed a 5.2x5.4x4 cm sized ill-defined lobulated SOL in right lobe of the liver. On venous phase there was enhancement of the lesion (less than the surrounding liver parenchyma) and delayed phase showed peripheral to central enhancement with central and peripheral IHBRD. These features were favouring malignancy, most probably an intrahepatic cholangiocarcinoma.

Tumour markers showed a raised CA 19-9 level (3334 IU) and serum AFP was marginally raised (11.98 IU). However, repeated histological evaluations of the aspirations from the abscess was negative for malignant cells.

In view of an obstructed biliary system, ERCP and CBD stenting with sphincterotomy was done. Cholangiogram revealed IHBRD with narrowing at the hilum of the hepatic duct. Brush cytology from the proximal CBD revealed few sheets of isolated malignant cells, with features suggestive of adenocarcinoma.

Sonography guided biopsy of the liver lesion was done to confirm the diagnosis of malignancy. Biopsy from the wall of the abscess cavity (figure 4) revealed a poorly differentiated adenocarcinoma, may be primary or metastasis. On further investigations, no other secondary lesion was detected. Diagnosis of primary intrahepatic adenocarcinoma was made.

In view of the patients poor general condition and comorbidities, operative intervention was not possible.

Discussion

Malignant biliary tract obstruction has emerged as an important cause of pyogenic liver abscess. Here we have

a60-year-old female patient, who presented with complaints of pain, fever and jaundice; was treated as a case of liver abscess which was non-resolving; CT scan gave high index of suspicion of malignancy and further investigations confirmed the diagnosis of intrahepatic cholangiocarcinoma.

There are very few reported cases of cholangiocarcinoma presenting as liver abscess in the literature. The first case from India was published by Vinit shah *et al* in 2015 ^[1]. In a study by Yi-Yin Jan *et al*, where 572 patients were studied over a period of 18 years Intrahepatic Cholangiocarcinoma (IHCC) was the cause of pyogenic liver abscess in only 3.3% of the cases.^[6] Liver malignancies, either primary or secondary, may form a liver abscess due to tumour necrosis getting liquefied and transforming in to an abscess, due to release of cytokines or due to paraneoplastic manifestations. This leads to associated fever. It can also be due to secondary obstruction of the biliary system by the tumour or the lymph nodes. ^[7] Liver abscess is a debilitating condition and symptoms of fever, jaundice, nausea and weight loss are nonspecific. Hence the diagnosis of malignancy in such cases is delayed, as these symptoms mimic those of liver abscess. IHCC mimicking pyogenic liver abscess represents a challenge. In a case of non-resolving liver abscess, triphasic CT scan gives a high suspicion of malignancy and tumour markers aids in the diagnosis, associated with a biopsy or brush cytology.

The learning lesson from this case is that a malignancy 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, elevated AFP/CA 19-9 levels, repeatedly negative aspiration cultures and typical findings on imaging. ^[1] Thus it is imperative that in elderly patients with non-resolving liver abscess, malignancy should be kept in mind as a differential diagnosis.

Abbreviations & Figure Legends

USG-Ultrasonography

CA 19-9-Carbohydrate antigen 19-9

AFP-Alfa Feto Protein

CEA-Carcino embryonic antigen

CT-Computed Tomography

MRI-Magnetic Resonance Imaging

HBV-Hepatitis B virus

HIV-Human Immunodeficiency Virus

IHBRD-Intrahepatic biliary dilatation

ERCP-Endoscopic RetrogradeCholangiopancreatography

CBD-Common bile duct

SOL-Space occupying lesion

AlkPo4-Alkaline phosphatase

IHCC-Intrahepatic Cholangiocarcinoma

Images
PTO



Fig 1: Axial plain CT scan sections of the upper abdomen showing the liver with an ill-defined hypodense lesion seen in the right lobe of liver.



Fig 2: Coronal contrast enhanced CT scan of the abdomen showing a heterogeneously enhancing predominantly hypodense lesion in the right lobe of liver showing no peripheral edema, capsular retraction or significant lymphadenopathy.

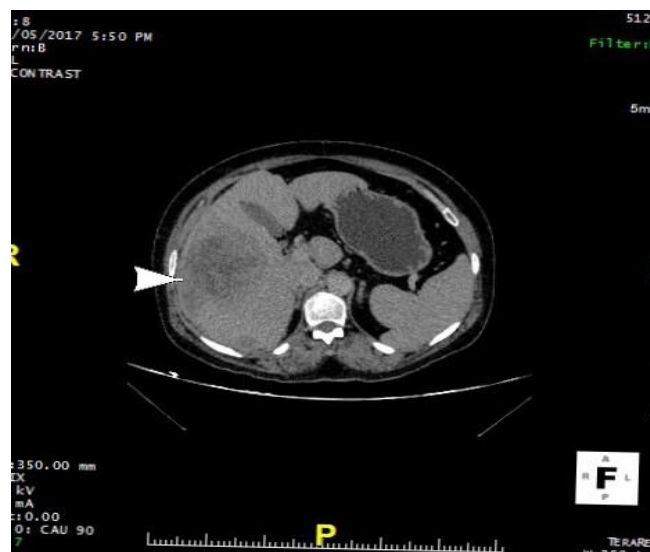


Fig 3: Axial delayed contrast enhanced CT scan of upper abdomen showing hypodense lesion with delayed heterogenous enhancement.

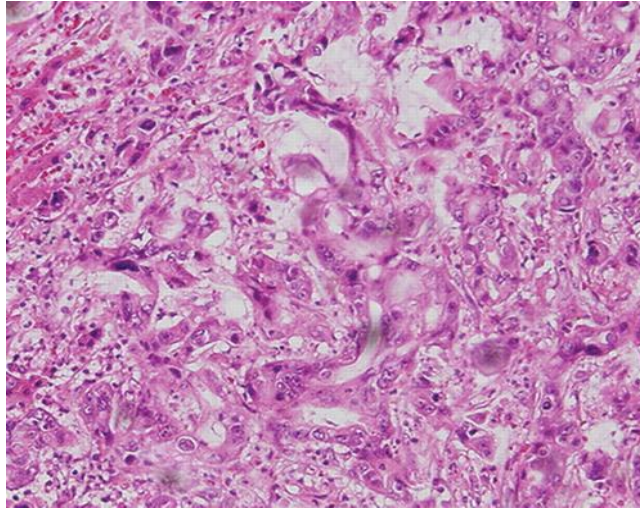


Fig 4: (original magnification x 100, H&E stain) deposits of poorly differentiated adenocarcinoma with desmoplastic stroma

References

1. Shah Vinit, Arora Anil, Pankajtyagi. Intrahepatic Cholangiocarcinoma Masquerading as Liver Abscess; *J Clin Exp Hepatol.* 2015; 5(1):89-92.
2. Tyson GL, El-Serag HB. Risk factors for cholangiocarcinoma. *Hepatology.* 2011; 54:173-184
3. Shaib Y, El-Serag HB. The epidemiology of cholangiocarcinoma. *Semin Liver Dis.* 2004; 24:115-125.
4. Everhart JE, Ruhl, CE. Burden of digestive diseases in the United States Part III: liver, biliary tract, and pancreas. *Gastroenterology.* 2009; 136:1134-1144
5. DeOliveira, ML, Cunningham, SC, Cameron JL *et al.* Cholangiocarcinoma: thirty-one-year experience with 564 patients at a single institution. *Ann Surg.* 2007; 245:755-762
6. Jan YY, Yeh TS, Chen MF. Cholangiocarcinoma presenting as pyogenic liver abscess: is its outcome influenced by concomitant hepatolithiasis. *Am J Gastroenterol.* 1998; 93:253-255.
7. Choi D, Lim HK, Kim MJ. Liver Abscess after percutaneous radio frequency ablation for hepatocellular carcinomas frequency and risk factors. *AJR Am J Roentgenol.* 2005; 184:1860-1867.
8. Li C, Li G, Miao R. Primary liver cancer presenting as pyogenic liver abscess: characteristics, diagnosis, and management. *J Surg Oncol.* 2012; 105:687-691.