

Coexistence of hepatocellular carcinoma and cyst hydatid disease of the liver

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Abstract

The evidence suggests that both delta hepatitis-related hepatocellular carcinoma (HCC) and cyst hydatid disease (CHD) are frequently seen separately in people who live in the rural areas of Asia. However, there are still a few case reports about coexistence of these different diseases in the same liver. The current case illustrates a number of clinical problems that physicians face in the diagnosis of patients with basically different liver masses.

Keywords: Hepatocellular carcinoma, Cyst hydatid disease.

Introduction

Cyst hydatid disease (CHD) of the liver is still hyperendemic in Turkey as well as many parts of the world. The presence of CHD is usually detected incidentally during a diagnostic work-up for another reason.¹ Globally, hepatocellular carcinoma (HCC) is the fifth most common tumour and it is mostly detected in a liver that has been damaged by chronic hepatitis B or hepatitis D. If the disease is left untreated a 5-year survival rate is expected less than 5% of patients.²

The coexistence of a primary cancer of the liver and hepatic echinococcosis was reported by Polish authors 25 years ago.³ Japanese authors also reported a detachable resectable case of HCC complicated with hepatic alveolar echinococcosis a decade ago.⁴ In the literature, there is no previously reported case of HCC due to delta hepatitis-related cirrhosis in association with an active cyst hydatid disease in the same liver. In this paper, a case is presented with HCC in connection with hepatic CHD.

Case Report

A 64-year-old man presented in the emergency department in May 2013 with a week's history of worsening abdominal dullness and nausea with decreased appetite. He was known to have hepatitis B but was not taking any medication. On admission, the patient's temperature was 38.4°C, blood pressure was

110/68 mmHg, pulse was 86 beats/min, respiratory rate was 20/min. and his oxygen saturation was 94% on room air. There was moderate ascites and nonspecific abdominal pain on palpation. His initial laboratory values were as follows; haemoglobin: 10.7g/dl (normal: 14-18), white blood cells 3200/mm³ (normal:5000-11000), platelet:130.000/mm³ (normal: 130000-450000), prothrombin time 16.8 minutes, aspartate amino transferase (AST): 126 U/L (normal: 0-35), alanine amino transferase (ALT): 102 U/L (normal:0-45), albumin: 2.6 g/dl (normal: 3.5-5.2), globulin: 3.4g/dl (normal: 2.3-3.5), alpha-fetoprotein (AFP): 61 ng/ml (normal: 0-13), His hepatitis B surface antigen and delta hepatitis antibody were also positive. His ELISA test for cystic echinococcosis was reported as positive. A diagnostic center is showed high albumin gradient ascites with infection. Computed tomography (CT) of the abdomen revealed liver masses including hypervascular HCC lesion in segment 6 and type III hydatid cyst in the left lobe (Figure-1). The histological assessment of the specimens taken from cystic mass revealed a hydatid cyst (Figure-2A). The pathologic examination of the biopsy specimens obtained from solid liver mass also revealed a well-differentiated HCC (Figure-2B). An ultrasonographic-guided percutaneous cyst aspiration was performed in

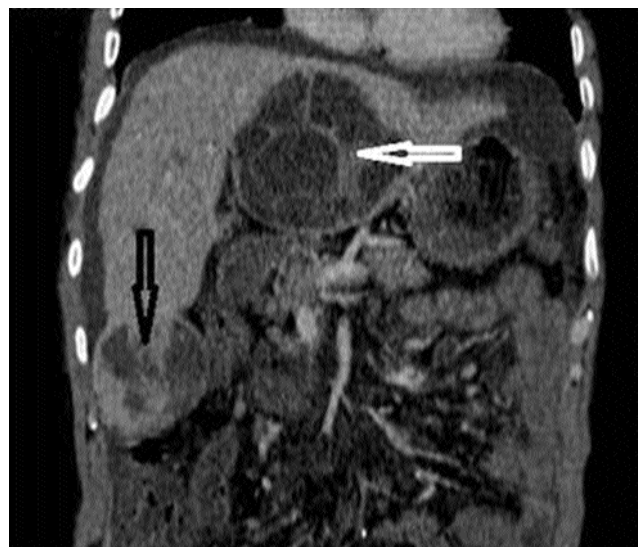


Figure-1: Reconstructed coronal image in the portal venous phase seen HCC lesion (black arrow) and type III hydatid cyst (white arrow).

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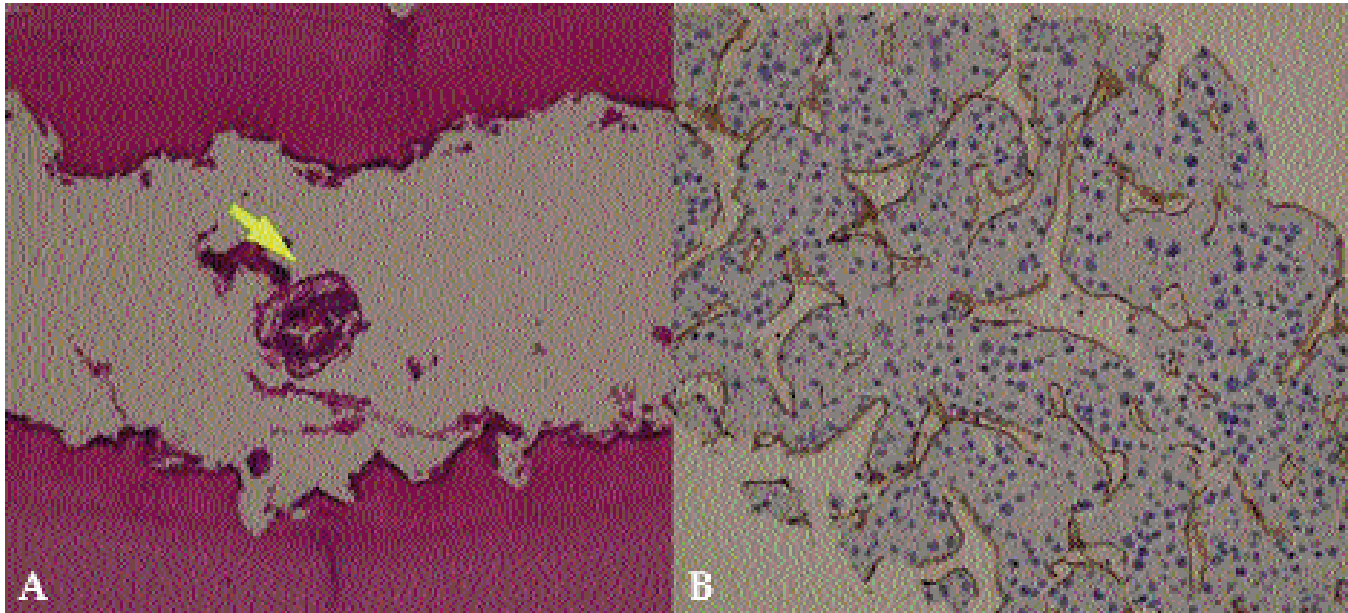


Figure-2: A) Histopathology of *Echinococcus granulosus* hydatid cyst (H&EX200). B) Hepatocellular carcinoma. Immunostain for CD34 shows endothelial cells surrounding the trabeculae (CD34x200).

the second week of the drug regimen which consisted of albendazole administered orally in a dose of 15 mg per kilogram of body weight per day for eight weeks. In accordance with the recommendation of the Barcelona Clinic Liver Cancer (BCLC) staging system, sorafenib at a dose of 800 mg. per day was also started. The clinical condition of the patient deteriorated, while he was taking sorafenib and albendazole therefore, it was clear that additional supportive treatment was required. The patient's follow up is still continuing in the medical oncology department of our hospital.

Discussion

The hepatitis delta virus (HDV) is still endemic in many parts of the Middle East. In patients with delta hepatitis-related cirrhosis, the cardinal concern is the development of HCC.⁵ Also, The risk of HCC increases among persons with chronic HBV infection who are positive for the hepatitis B surface antigen.² The diagnosis of HCC can be made in patients with characteristic features such as a mass larger than 2cm, arterial hypervascularity, venous or delayed phase wash-out in a single dynamic imaging technique. Higher levels of AFP may also support the diagnosis of HCC.⁶ In this case, there were typical imaging and histopathological features about HCC. Also the AFP level was high. However in this case, the causes of the HCC were not determined since both his hepatitis B surface antigen and delta hepatitis antibody were also positive.

Cyst hydatid disease can be localized in any organ and it is

an important public health issue in some countries including Turkey. A hydatid cyst can be classified into five types according to the widely accepted radiologic classification; type I consists of a pure fluid collection; type II is a fluid collection with a split wall; type III is a cyst containing daughter cysts and septations, with a predominantly fluid component; type IV is a cyst with a predominantly heterogenous solid pattern with few daughter cysts and type V is a calcified non-viable degenerated cyst. Surgical resection or drug therapy with benzimidazoles (mebendazole and albendazole) and percutaneous drainage have been accepted as the first line of treatment in patients with an active hydatid cyst.⁷ Although there is no broad range of treatments for CHD of the liver in a patient with advanced stage HCC, but there are some options that can prevent the progression of the disease. The patient in this case has many features of decompensated cirrhosis. Surgical or a laparoscopic approach to hepatic hydatid cysts in patients with decompensated liver cirrhosis carries a huge risk of clinically significant bleeding therefore, a percutaneous cyst drainage procedure was performed with albendazole therapy.^{8,9}

The BCLC staging system is the method currently used to stage HCC and this system is the widely accepted as a treatment option. The BCLC system consists of very early or early, intermediate and advanced stages.¹⁰ Patients with decompensated cirrhosis, poor performance status or symptomatic lesion measuring higher than 6 cm in

diameter are considered to have advanced-stage HCC. In these patients, the oral multikinase inhibitor sorafenib is considered as the standard of care.² Sorafenib was started in this case since the patient was in an advanced stage.

Conclusion

Etiologically different lesions may be evident in the same liver therefore; clinicians should be vigilant during diagnostic work-up in these unique patient groups.

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