

Right atrial metastasis in a case of hepatocellular carcinoma

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ABSTRACT

Hepatocellular carcinoma (HCC) is a well-known complication of chronic hepatitis B. Most cases of HCC are diagnosed at an advanced stage and the tumor spreads most frequently to the lungs, peritoneum, adrenal glands, and bones. Intra-cavitary cardiac extension of HCC is a very rare entity. We present a case of HCC in the background of chronic hepatitis B with the atypical presentation of metastasis to right atrium, with inferior vena cava and hepatic veins having normal patency.

Key words: Chronic hepatitis B, hepatocellular carcinoma, right atrial metastasis

INTRODUCTION

Right atrial metastasis is common in cases of renal cell carcinoma, thyroid carcinoma, and testicular tumors, but intra-cavitary right atrial metastasis is rarely reported in case of hepatocellular carcinoma (HCC). Here, we are reporting a case of chronic hepatitis B presenting with HCC which spread into right atrium (RA) without involving inferior vena cava.

CASE REPORT

A 62-year-old male admitted in our medicine ward with weight loss and anorexia for 3 months, jaundice for 1 month, and abdominal pain for 10 days. On examination, patient was grossly emaciated. There was jaundice, mild pallor, blood pressure -120/70, and pulse rate -88/min. Jugular venous pressure was not elevated. On gastrointestinal system examination, epigastric veins were tortuous and distended. There was a hard palpable liver with a liver span of 15 cm. Splenomegaly was also present.

On investigation, the levels of the following were total bilirubin -10.6 mg/dl with conjugated portion of 7.6 mg/dl, aspartate aminotransferase -150IU/L, alanine aminotransferase -120IU/L, alkaline phosphatase -600 IU/L, albumin -2.6 gm/dl, and globulin -3.8 gm/dl. Prothrombin time was 16.2 s with control 12 s. Hepatitis B surface antigen was positive and Alfa Feto Protein was 1500 ng/ml. Computerized tomography scan abdomen revealed features of chronic liver disease with a mass in the right lobe of liver. On 3rd day of admission, patient developed respiratory distress with minimal respiratory findings. Echocardiography [Figure 1] was performed and it showed a mass occupying whole right atrial cavity, sparing the upper portion. Inferior vena cava

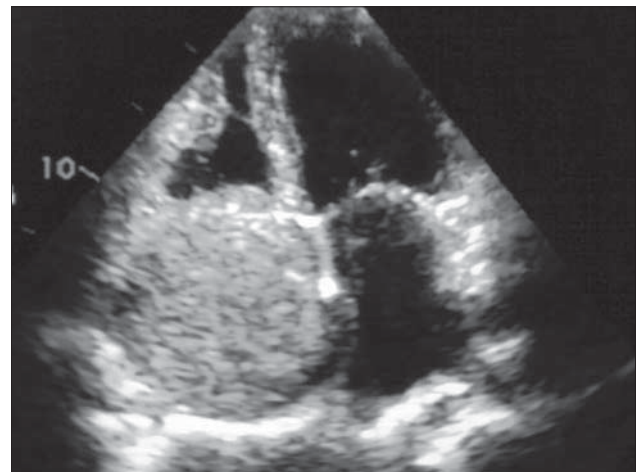


Figure 1: Echocardiography showing large right atrial mass

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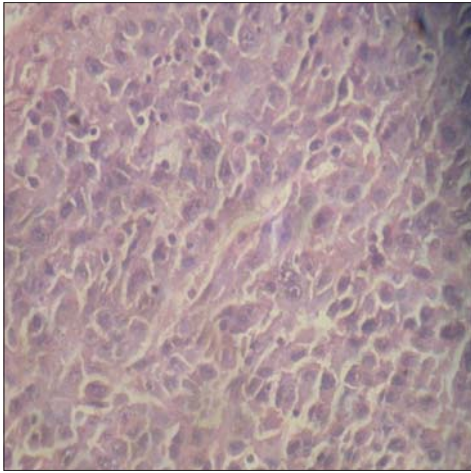


Figure 2: Liver biopsy showing hepatocellular carcinoma

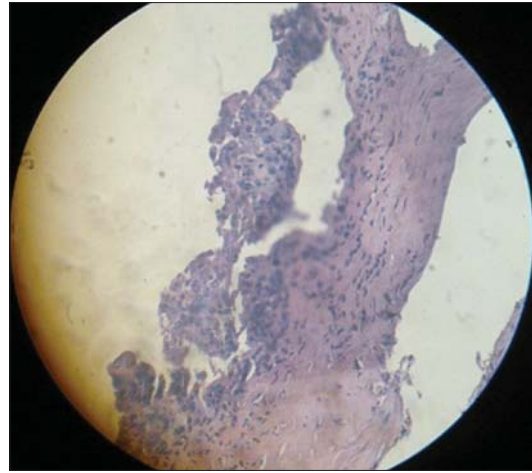


Figure 3: Biopsy from right atrial mass showing metastatic hepatocellular carcinoma

and hepatic veins were absolutely free. Unfortunately, patient succumbed to death within few hours.

After taking proper party's consent, postmortem biopsies from liver mass and right atrial mass were taken. Liver biopsy [Figure 2] was suggestive of HCC and biopsy from the mass in right atrial cavity [Figure 3] showed features of metastatic HCC.

DISCUSSION

HCC is the most common primary malignant tumor of the liver. Recent studies have suggested that the incidence rates of HCC are increasing. HCC is a well-known complication of chronic hepatitis B. Most cases of HCC are diagnosed at an advanced stage and the tumor spreads most frequently to the lungs, peritoneum, adrenal glands, and bones. Intra-cavitary cardiac extension of HCC is a very rare entity but reported.^[1] By far the most frequently implicated primary tumor involving the right heart is renal cell carcinoma, followed by carcinoma of the thyroid, testicular tumors, and liver carcinoma.

HCC is known to have a marked propensity for vascular invasion and extension. Tumor growth into the cardiac cavity is relatively rare, occurring mostly in the (RA). The mechanism of cardiac involvement is related to the propensity of this tumor to invade the vena cava,

thus easily reaching the cardiac cavities.^[2] But in our case there is a direct involvement of RA without involving IVC and hepatic veins which is very rare. Seeding of the cancer cells into the atrial cavity followed by the growth of the tumor is the most likely mechanism in this case.

This report describes an unusual case of involvement of the RA from HCC.

CONCLUSION

HCC is a well-known complication of chronic hepatitis B. Distant metastasis may intrude RA evading the usual sites of metastasis even without involving inferior vena cava.

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