ADVANCED HEPATOCELLULAR CARCINOMA PRESENTING AS RIGHT ILIAC FOSSA MASS

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ABSTRACT
Hepatocellular carcinoma is the most common primary hepatic malignancy. Hepatocellular carcinoma presenting itself or extending into the right iliac fossa is extremely rare. We report on a rare case of hepatocellular carcinoma in a 52 year old man with history of chronic hepatitis B related liver disease in family, who presented with a mass in the lower abdomen associated with hepatic mass with cirrhosis and normal α-feto protein levels.

Keywords: Cirrhosis, Hepatocellular Carcinoma, Portal Hypertension, Hepatitis B

INTRODUCTION
Hepatocellular carcinoma (HCC) is the commonest primary cancer of the liver. The gross appearance of HCC had been classified into: nodular, massive or diffuse or according to the growth pattern includes expanding, spreading, multifocal or indeterminate. Exophytic growth or pedunculation is not uncommon. Studies have shown that exophytic HCCs constitute 0.2 – 4.2% of all HCCs (Wands, 2007). Increasing age and male sex are independent risk factors for HCC.

Men have a higher prevalence of hepatocellular carcinoma than women. The presented case is of a middle aged man with perinatal chronic hepatitis B and cirrhosis with unusual presentation as a right iliac fossa mass lesion.

CASES
A 52 year male, with family history of hepatitis B related (HBV) cirrhosis in mother and hepatocellular carcinoma (HCC) in an elder brother, not screened for HBV, presented with complaints of generalized weakness, loss of appetite for 8 weeks and significant weight loss of 7 kg in preceding month with associated heaviness and progressive fullness over the lower right abdomen.

Examination revealed mild pallor, grade 2 clubbing of fingers, nodular hepatomegaly with splenomegaly and a hard mass felt in the right iliac fossa region.

Clinical diagnosis of underlying chronic liver disease was made, and a differential diagnosis was made for a pedunculated mass from liver, right colonic tumour or a cecal mass or distal ileal mass. The patient was investigated with liver function test, which showed normal bilirubin (0.8mg/dL) with normal serum aminotransferases but with hypoalbuminemia (serum albumin 2.4 g/L) and chest X-ray showed no positive findings.

Ultrasound abdomen was inconclusively reported as mass within the liver with another similar lesion in right iliac fossa (RIF). Other laboratory investigations revealed HBsAg positivity, anti HBe negative, and DNA 2.3 x 10⁵ U/mL. Upper gastrointestinal endoscopy showed grade 2 esophageal varices. Dynamic magnetic resonance imaging of the abdomen revealed mass lesion with arterial enhancement, rapid porto-venous and delayed phase washout, in segment VII (4.1 x 4 cm, Figure 1, yellow arrow) of the liver and associated RIF mass (8.3 x 5 cm, Figure 1, red arrow) with similar contrast imaging characteristics.

Alpha-fetoprotein was 228 ng/mL. Core biopsy of both lesions, followed by immune-histochemistry was suggestive of well differentiated HCC (Figure 2A-C).
Case Report

Figure 1: Contrast Enhanced Magnetic Resonance Imaging of the Abdomen Showing a Mass Lesion with Arterial Enhancement, in Segment VII (4.1 x 4 cm, Yellow Arrow) of the Liver and Associated RIF Mass (8.3 x 5 cm, Red Arrow)

Ultimately, a diagnosis of cirrhosis, secondary to chronic hepatitis B infection was made, with the patient in compensated status (Child Pugh Class B, Score 8) and in view of advanced HCC, palliation in the form of drug eluting bead-trans-arterial chemo-embolization (Deb-TACE) of both lesions were done in 2 sessions, one month apart with addition of sorafenib 400mg in divided doses.

DISCUSSION

Hepatitis B is the single most common cause of HCC world-wide. In HBV carriers without cirrhosis, the risk of developing HCC is 0.01 – 1.4 % per year in endemic areas which rises to 1 – 5 % per year in cirrhotics (Trépo et al., 2014).

Advanced age (> 40; not duration of infection), high viral load > 2000 IU/mL, and persistently elevated alanine transaminase, family history of HCC and absence of antiviral treatment are associated with risk of malignancy (Park et al., 2012). Usually HCC presents as an abdominal mass or hepatomegaly with hard and irregular borders with or without a vascular bruit. Rare presentations with extensions are cited in literature.

A case of giant pedunculated HCC combined with haemangioma, in the right iliac fossa presenting with clinical features of intestinal obstruction and retroperitoneal extension of HCC, mimicking a right adrenal tumour has been described in literature (Kim et al., 1993; Karatzas et al., 2011) Extrahepatic metastases are usually a late occurrence in the course of HCC.
Various uncommon sites of metastases have been described in literature including, adrenal gland, duodenum, skin, rib, skull bone, mandible, pelvis and vertebra. However, lung involvement is the commonest (Fukutomi et al., 2001). Invasiveness of HCC has a strong molecular basis with factors such as p16 and p53 mutation, TGFα, epidermal growth factor receptor (EGF-R), matrix metalloproteinase-2 (MMP-2), intercellular adhesion molecule-1 (ICAM-1), vascular endothelial growth factor (VEGF), and platelet-derived endothelial cell growth factor (PD-ECGF) showing positive correlation with invasiveness, while tissue inhibitor of metalloproteinase-2 (TIMP-2), integrin α5, E-cadherin, negatively correlated. Comparative genomic hybridization between primary HCC and their metastatic lesions indicated chromosome 8p deletion to contribute to HCC metastasis (Tang, 2001). We found only one
another case with index presentation of HCC in the form of a RIF mass (Uthamalingam and Periyasamy, 2015) in literature which makes this presentation unique among HCC patients. There is a change in paradigm of HCC presentations and a more genome based approach and treatment could become the future of management of such advanced diseased patient population.

REFERENCES