CASE REPORT

An Exophytic Hepatocellular Carcinoma in an Undiagnosed Cirrhotic Liver Mimicking an Intraperitoneal Soft Tissue Sarcoma

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ABSTRACT

Exophytic hepatocellular carcinoma is a rare type of hepatocellular carcinoma (HCC), which may present with a wide variation in clinical presentations and imaging findings. Thus it may cause diagnostic dilemma and may need a multidisciplinary approach management tailored to individual patient for a better outcome. Here we reported a case of a patient with exophytic hepatocellular carcinoma mimicking an intraperitoneal sarcoma.

INTRODUCTION

One of the commonest malignant primary liver tumours in an adult male, is Hepatocellular carcinoma (HCC). An exophytic HCC is a rare type of HCC which poses a greater challenge in diagnosis based on radiological imaging alone. We reported an exophytic HCC with a variant in imaging features inconclusive of the organ of origin, and the disease was already metastatic even after time saving decisions were made to proceed with exploratory laparotomy and tumour resection. We lost the patient as he succumbed to the operative complication.

CASE REPORT

A 45 years old gentleman, an ex-smoker, presented with right sided abdominal pain and progressive grossly distended abdomen associated with significant weight loss of about 35kg in 5 months. There was a family history of hepatitis in his father and brother. The patient also had a history of treatment sessions with the traditional healers who did massage on his distended abdomen. On examination, the abdomen was soft with a large palpable mass in the right lumbar region extending to the left side. The laboratory results which were received after the imaging showed high levels of serum alpha-fetoprotein (AFP) levels and positive for hepatitis screening.

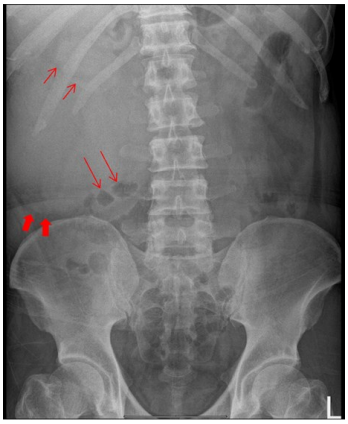

Figure 1: Abdominal radiograph showing a large right abdominal mass with its lower margin seen just above the right iliac crest level (solid arrows), displacing the bowel inferior and to the left (long arrows) and the right kidney to a more superior position (short arrows).

An abdominal radiograph showed a vague large right abdominal mass with only its lower margin visualised just above the right iliac crest level. There was a displacement of the gas filled bowel loops to the inferior and left of the abdomen and also mass effect to the right kidney to a more superior position. At this stage, the mass was thought to arise from a retroperitoneal origin with non-visualised right psoas

muscle. Ultrasound of the abdomen (Figure 2) was then performed with the mass seen within the peritoneum and no obvious involvement of the psoas muscle or the abdominal wall. Liver appeared coarse in echotexture with nodular margin and multiple small hyperechoic lesions of various sizes were seen scattered within the right liver lobe.

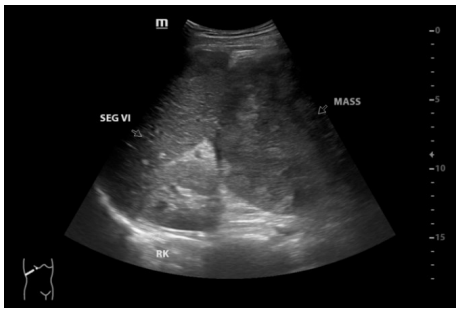

Figure 2: Ultrasound image showing the mass as an intraperitoneal mass which was compressing onto and closely attached to the right liver lobe.

Further investigation with contrast enhanced CT of the abdomen and pelvis (Figure 3) was then performed showing a large solid, heterogeneous mass in the right lumbar region with lobulated contours and areas of hypodensities consistent with necrosis. Multiple other enhancing hypodense lesions within the right liver lobe were also noted suggestive of metastasis.

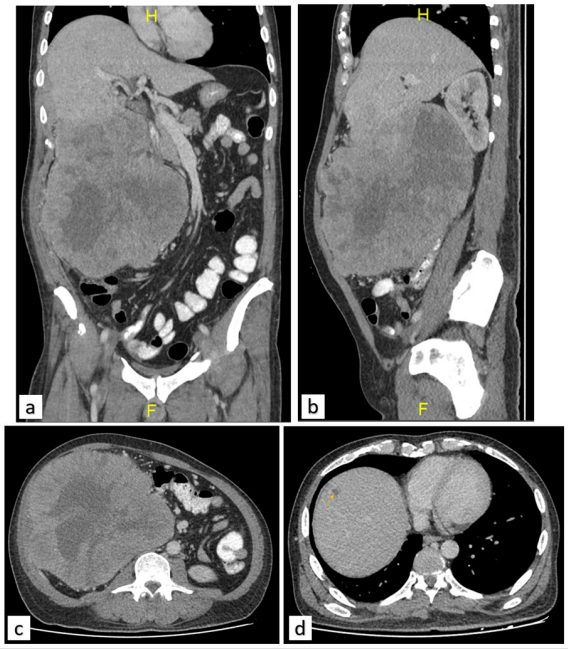

Figure 3. Coronal section (a) shows the epicenter of the mass is within the right lumbar region and the superior aspect of the mass forming acute angles indicating either an intraperitoneal mass invading the liver or an exophytic hepatocellular carcinoma (HCC). The exophytic appearance is also well appreciated on the sagittal section (b) which also shows the compression of the right kidney and invasion of the anterior abdominal wall. Axial section at the right lumbar region shows the mass with necrotic centre (c) and another axial image at the upper level of the liver shows a hypodense enhancing small lesion in segment VIII representing metastasis (d).

The imaging features were either of an exophytic HCC or an intraperitoneal mass. Laboratory findings of associated hepatitis and raised serum AFP levels would substantially indicate a diagnosis of the former. A multidisciplinary team meeting was then called for where it was decided to proceed with an exploratory laparotomy and tumour resection in view of the patient's worsening and painful state.

The patient underwent a right lobe hepatectomy and resection of the neoplasm (Figure 4). Intraoperatively, tumour was confirmed to be adhered to the right diaphragm, anterior and lateral abdominal wall extended to right lobe of liver, it was also found to infiltrate terminal ileum, caecum and ascending colon. Pathological examination revealed moderately differentiated hepatocellular carcinoma. Unfortunately, our patient had operative complications and passed away shortly after.

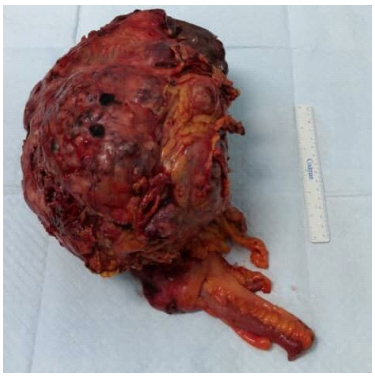

Figure 4: Gross specimen of the resected tumour in the photo is a cut open complex specimen of the right liver segment adhered to the hemicolectomy specimen, consisting of a liver fragment weighing 4371 g and measuring 26cm × 17cm × 20cm with an irregular-lobulated surface, multiple ruptured areas and haemorrhage.

DISCUSSION

Hepatocellular carcinoma (HCC) is one of the primary tumour of the liver which is the most common type.[1] It is typically associated with liver cirrhosis, however approximately 20% of cases were found to occur in patients without it.[2] The peak incidence of HCC is in the second and seventh decades of life affecting men two times more than women.[2] Of the varied conventional HCC presentation, it may also manifest as a large solitary mass.[1]

An exophytic presentation of HCC is extremely rare.[3] This type of tumour was found to be as rare as 0.24-3.0% of all HCC cases in Japan.[4] Unlike the conventional presentation, an exophytic HCC atypically presents as an extra-hepatic mass which simulates other types of primary tumour. According to a study, exophytic HCC has been reported in seven patients as extrahepatic masses on CT, all mimicking tumours of primary extrahepatic origin, in which the final diagnosis was confirmed only after percutaneous biopsy, surgical resection, or necropsy.[5]

Here, we have presented the case of a patient with a family history of liver disease, had raised alpha-fetoprotein serum levels and presented with a large right lumbar mass that was in contact with the liver. Even though the liver appeared cirrhotic, the initial diagnosis was that of an intraperitoneal soft tissue sarcoma. The differential diagnosis considered were epithelioid gastrointestinal stromal tumour and hepatocellular carcinoma. The diagnosis could not be made solely on the basis of the clinical data. Even though the exophytic HCC has several different radiological spectrums from the conventional HCC [6], yet it cannot be differentiated from an intraperitoneal mass.

CONCLUSION

Exophytic HCC still remains difficult to diagnose based on imaging alone. Therefore, when a large lobulated mass is discovered in the abdomen and is in contact with the surface of liver, the possibility of an exophytic HCC as a diagnosis should be highly considered especially in patients who have risk factors for the condition [(7)].

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