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Unusual Presentations of Hepatocellular Carcinoma

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Hepatocellular carcinoma (HCC) constitutes more than 90% of primary liver cancers and is a major global health problem[1]. Peritoneal dissemination of hepatocellular carcinoma (HCC) is a rare presentation, with an incidence of 2% to 6% detected during autopsy or laparoscopy[2].Gastrointestinal tract involvement is noted in 4-10% of cases and mostly via direct invasion and hematogenous metastasis and is rather rare[3]. To the best of our knowledge, HCC with peritoneal metastasis diagnosed by trans rectal endoscopic ultrasound guided biopsy has not been reported previously. The current report is of 2 cases of metastatic HCC one each to peritoneum and stomach presenting with abdominal mass and gastrointestinal bleeding.

Case Report

Patient A: A 63 year old male diagnosed case of decompensated chronic liver disease presented with abdominal pain and significant weight loss of 10 kgs for 1 month duration. On examination, he had palpable liver without any bruit, ascites and an ill-defined pelvic mass. Ultrasound abdomen followed by contrast enhanced computed tomography (CECT) abdomen revealed multiple lesions in both lobes of liver enhancing in the arterial phase- largest measuring 2 X 1.8 cm. There were multiple enhancing pelvic deposits- largest measuring 15 X17 cm and moderate ascites (**Figure 1**). He was non reactive for hepatitis B surface antigen and hepatitis C virus. Alpha fetoprotein (AFP) levels were elevated-414 ng/mL (normal:<10ng/mL). Large pelvic deposit is unusual in HCC, so an endoscopic ultrasound (EUS) guided biopsy was done. Transrectal EUS revealed 7x5 cm heteroechoic pelvic mass with moderate ascites in pararectal area. Fine needle aspiration biopsy was done and cellular smears comprising of sheets, clusters and trabeculae of round to polygonal neoplastic cells with abundant clear cytoplasm were seen. Immunohistochemistry (IHC) revealed Hepatocyte

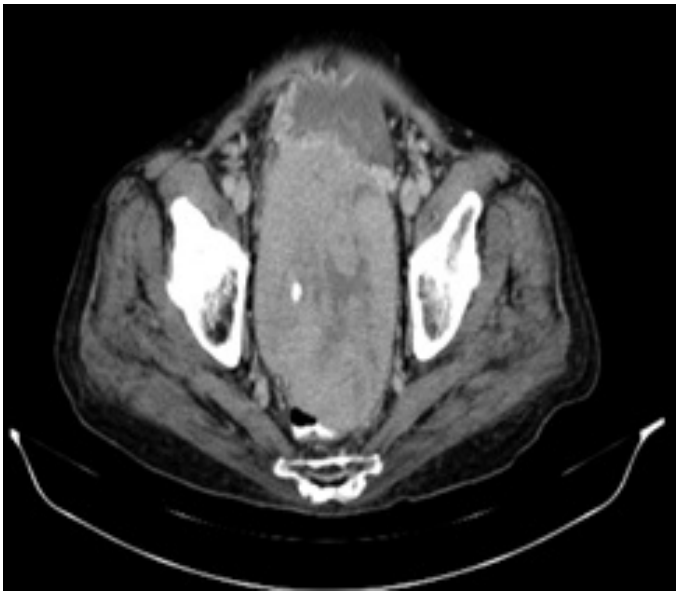

Figure 1: CECT abdomen showing multiple enhancing pelvic deposits.

Paraffin (HepPar1): Negative, AFP: Positive, Alfa 1 anti-trypsin: Negative ,Pan CK: Positive; Cytokeratin (CK) 7: Negative (**Figure 2**). Despite inconclusive Hep Par1 immunostain a diagnosis of Clear cell variant of hepatocellular carcinoma (CHCC) was made as all other clear cell tumors were ruled out by IHC and imaging. He was treated with sorafenib, but succumbed to illness after 4 months of diagnosis.

Patient B: A 77 year old male, diagnosed case of HCC BCLC stage D on sorafenib for 4 months, under regular follow up with primary endoscopic variceal ligation schedule presented with hematemesis and melena. Emergency endoscopy was performed which revealed small esophageal varices, diffusely hyperemic stomach with multiple submucosal lesions with surface ulceration and hemorrhage (**Figure 3**). Microscopic examination revealed round to polygonal cells with pleomorphic hyperchromatic nuclei, prominent nucleoli and eosinophilic cytoplasm suggestive of malignancy. The results of IHC stains were positive for Hep Par 1 and negative for CK7, CDX-2. These histologic features resulted in the diagnosis of metastatic HCC.

Discussion

HCC is the fourth and eighth leading cause of cancer related mortality in "India specific" men and women respectively[4]. The frequency of peritoneal seeding of HCC is noted to occur in 5.6%-14.5% following spontaneous rupture of HCC and tumor seeding[5]. Our case had peritoneal metastasis without any clinical evidence of tumor rupture. The cause of spread might be hematogenous. Cytoreductive surgery for HCC with peritoneal metastasis is related to severity of CLD, tumor involvement and response to surgery determines the prognosis of advanced HCC. In our first case with CTP C status, the extrahepatic metastases to peritoneum precluded any possibilities of surgery, transplantation and any radiological interventional procedure (balloon occluded transarterial chemoembolisation).

Gastrointestinal involvement in HCC is reported in 0.5-2% of all HCC cases. Hypervascular exophytic subcapsular large > 5 cm HCC with or without transarterialchemoembolisation (TACE) can directly invade stomach, duodenum, jejunum or colon. Only about 30 cases of direct invasion of HCC to stomach are reported in English literature so far[6].

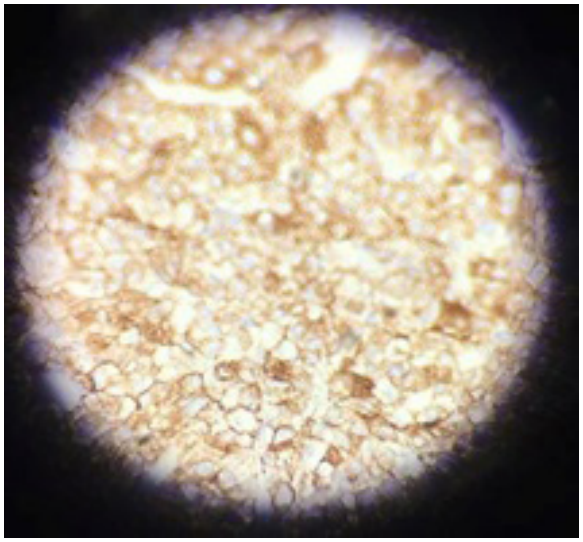

Figure 2: IHCstaining showing positivity of Pan-CK.

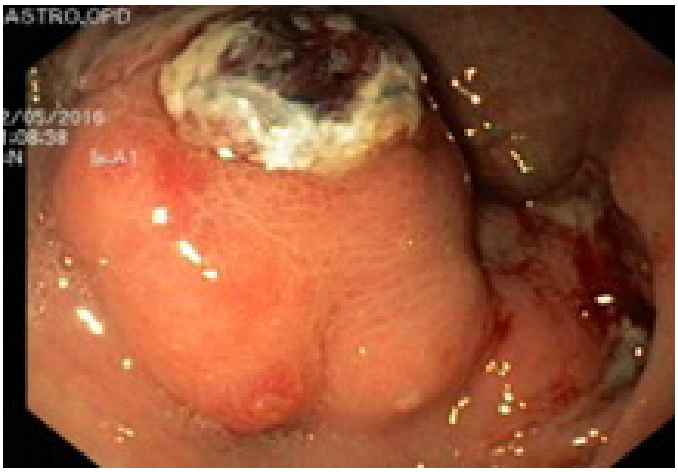

Figure 3: Endoscopy shows gastric submucosal lesions with ulceration and hemorrhage.

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Utility of Endoscopic Ultrasound in Symptomatic Cut Corners of a Clot

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Thoracic aorta intramural thrombosis accounts for 0.9% of all etiologies of peripheral arterial thrombosis[1]. The frequent origins are intracardiac, intraaneurysmal, atherosclerotic lesions, trauma, malignancies and coagulation disorders[2]. The current use of echocardiography and computed tomography has facilitated in early diagnosis of aortic thrombosis as a cause for peripheral thromboembolic episode[3]. The purpose of the case report is to review the diagnostic capability of endoscopic ultrasound (EUS) beyond the routine evaluation of gastrointestinal organs.

Case Report

A 48 year old male, presented to the emergency department with severe chest and abdominal pain for 3 days duration. He denied any history of shortness of breath or palpitations. He was a known hypertensive on treatment for 8 months. He had no habits. Physical examination was unremarkable. He was evaluated at a local hospital and was prescribed an anti-inflammatory and anti spasmodic for pain but he reported no improvement. Ultrasound abdomen revealed a hypo echoic spleen, probably an abscess or infarct and was referred for evaluation of the same.

Laboratory test results were all within normal limits including common blood cell counts, liver chemistries, renal parameters and serum lipase. Contrast enhanced computed tomogram of the abdomen and pelvis showed splenic infarct secondary to splenic artery thrombosis and segmental renal infarcts due to renal artery thrombosis.Transthoracic echocardiography (TTE) showed neither valvular nor intra cavitary anomalies. Ventricular ejection fraction was preserved. He was referred for Endoscopic Ultrasound (EUS) evaluation of splenic artery thrombus and for ruling out any pancreatic pathology.With a Pentax EG-3870UTK endoscope coupled to a Hitachi HI Vision Avius estiva console (ultrasound beam frequency at 7.5 MHz), endoscopic ultrasound was performed without complications. EUS showed a splenic artery thrombosis and splenic infarct (**Figure 1**). On colour doppler evaluation, flow was noted in splenic vein and no flow in splenic artery (**Figure 2**). The surrounding pancreatic parenchyma, aorta with celiac take off was normal. The thrombus in the splenic artery was noted from the celiac bifurcation. The outer border of descending aorta abuts against the left lung and makes