CASE REPORT

Intestinal Perforation of Pedunculated Hepatocellular Carcinoma (Rare among rarities)

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ABSTRACT:

BACKGROUND:

Pedunculated type is a rare macroscopical form of hepatocellular carcinoma.

CASE REPORT:

47 years old male complained from vague abdominal pain, anorexia, weight loss and malena during the last few months**.** Abdominal ultrasound and spiral CT scan revealed a vascular mass 17x13 cm. in diameter occupying the whole right side of the abdomen. On exploration the mass was perforated into a segment of ileum due to direct invasion and attached to the liver by vascular pedicle. The mass was completely excised with segment of ileum followed by end-end anastomosis. Immunohistochemical study shows that the tumor was stained by alpha-fetoprotein staining confirming the diagnosis of pedunculated hepatocellular carcinoma.

CONCLUSION:

pedunculated hepatocellular carcinoma should be kept in mind in any differential diagnosis of large intraperitoneal mass even if it is not related to the liver by imagining study.

KEYWORDS: hepatocellular carcinoma, pedunculated, intestinal invasion.

INTRODUCTION:

Hepatocellular carcinoma (HCC) is the most common primary malignancy of the liver and one of the most common malignancies worldwide [(1)]. The macroscopic appearance of HCC had been classified into: nodular, massive or diffuse, other classifications was adopted by Okuda et al according to the growth pattern or spread include expanding, spreading, multifocal or independent [(2)].

However, some HCC tend to grow extrahepaticaly with much of tumor mass being visible outside the liver capsule, which is called pedunculated HCC. This type of HCC is connected to the liver by a small vascular stalk and is easily resected without sacrifice of significant amount of non-neoplastic liver tissue [(1)].

This is a case report of pedunculated HCC which perforated into small bowel causing severe bleeding per rectum, to highlight the importance of this rare and potentially curative disease.

CASE REPORT :

47 years old male complained from vague abdominal pain, anorexia and weight loss during the last few months, but since the last week the patient developed malena. The patient was slightly pale and there was a visible and palpable abdominal mass extending from the right hypochondria to the right iliac fossa. The hematological investigations revealed anemia and positive for hepatitis B virus surface antigen (HBs Ag), which was discovered recently. Abdominal ultrasound as well as spiral CT scan revealed that there was a vascular mass 17x13 cm. in diameter occupying the whole right side of the abdomen with central necrosis, cystic degeneration and contrast enhancement at the periphery (figure 1&2).

Suddenly, and during preparations for surgery the patient develop severe hematochazia (passing of maroon colored stool) with hypotension, that he required blood transfusion of 8 units. Urgent upper and lower gastrointestinal endoscopy failed to identify the cause of the bleeding. However, the patient underwent urgent laparotomy which revealed a big tumor with central necrosis and hemorrhage extended from the liver to the pelvis pushing the small bowel to the left. The mass perforated into a segment of small bowel due to invasion, and it was in contact to the liver but easily separated from it except a vascular pedicle from the inferior surface of the right lobe which required transfixing ligation to be controlled. The mass contain about 3 liters of blood stained fluid and it was impossible to excise only after complete evacuation of its contents. The loop of small bowel which invaded by tumor was excised and end-end anastomosis performed.

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The patient develop high output small bowel fistula in the 5th postoperative day which was treated conservatively, the fistula closed spontaneously and the patient discharge home after 24 days.

The histology revealed that there are sheets of malignant epithelial cell arranged in trabiculae separated by vascular struma and sinusoids, the tumor infiltrating the outer layer of small bowel. There tumor cells were positive for alpha-fetoprotein (AFP) on the immunohistochemical staining (figure 3), picture consistent with moderately differentiated HCC. So the diagnosis of pedunculated HCC was confirmed.

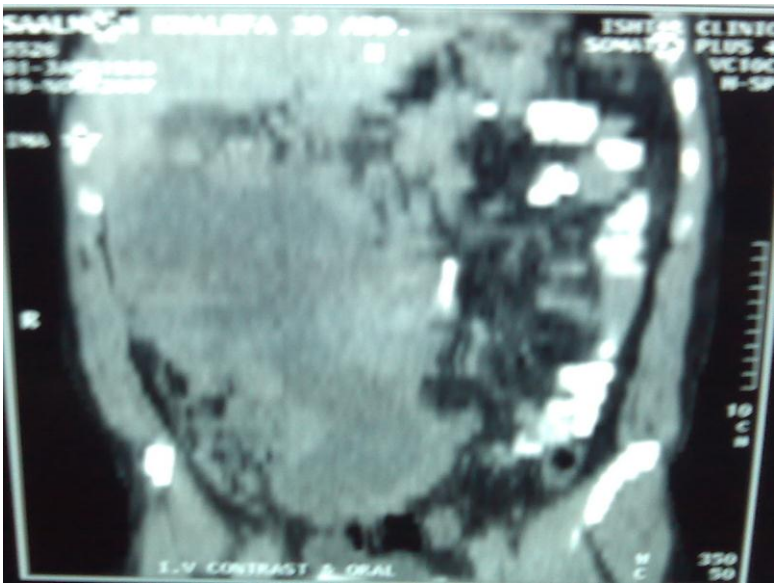

Figure 1: Coronal section of abdominal spiral CT scan revealed big mass almost occupy whole abdomen with central necrosis.

DISCUSSION:

Pedunculated HCC is a rare variant of HCC, and it represents 0.24% to 3% of all cases [3].

There are two types of pedunculated HCC ; type I when it has intrahepatic origin, type II when it has extrahepatic origin and there is no connection between the liver and the mass except that it supplied by branch of hepatic artery (vascular pedicle) [2,3,4],this is called also as hanging type [1,2,5].

Yeh et al found that among 432 surgical resected HCC, 18 (4.2%) were pedunculated which has significantly better overall survival; the mean survival in the pedunculated group was 94 months compared with 54.5 months for non-pedunculated HCC, this may be due to these subgroups has more capsule formation, less vascular invasion, and wider resection margins although they were larger tumor size [6].

The diagnosis of pedunculated HCC is usually obscured, despite modern invasive and noninvasive methods, and laparotomy or autopsy were required for specific identification of tumor type [7]. It can grow to substantial size without involving much normal liver tissue [2].

Pedunculated HCC may be more amenable to curative resection than other types due to its unique localization and growth pattern [5,7].

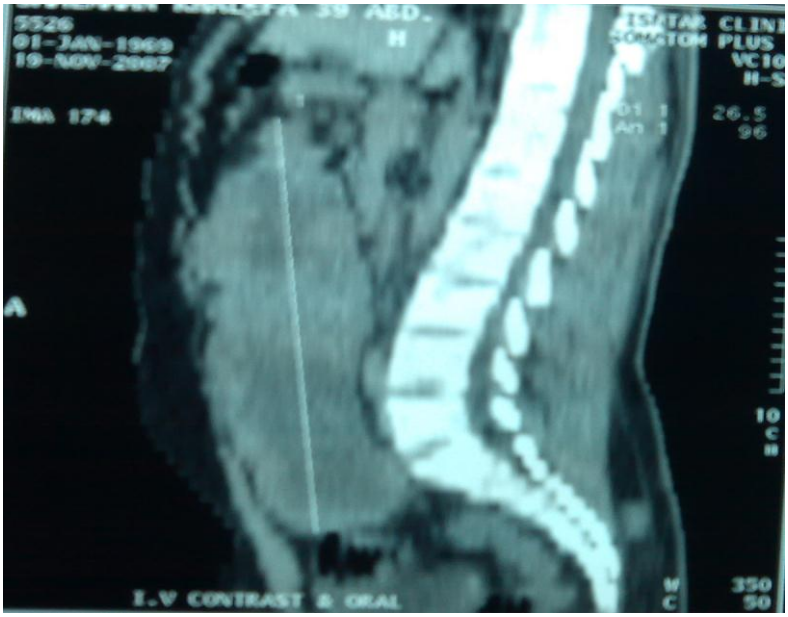

Figure 2: Sagital section abdominal spiral CT scan revealed big mass almost occupy whole abdomen with central necrosis.

HCC rupture with potentially fatal haemoperitoneum is not an infrequent complication of primary HCC with prevalence between 2.9 and 26 % [8,9,and 10]. Yeh et al found that those patients usually presented with acute abdominal pain and treated by hepatic resection with1-, 3- and 5-year survival rates of 72.1, 47.3 and 33.9 per cent, which is comparable with non-ruptured group [11].

The majority of HCC associated GI bleeding is caused by esophageal bleeding, however the minority are caused by perforation into GI tract by tumor invasion [5]. Chen et al reported that among the 396 patients with hepatocellular carcinoma who presented to their hospital in Taiwan between 1982 and 1988, 8 (2%) cases with HCC had spread to the GI tract, the most common presentation was frank gastrointestinal bleeding [12]. The majority of the reported of gastrointestinal invasion was to the duodenum because of the proximity [13,14,15,16].

This is a report of rare case of pedunculated HCC presented with lower GI bleeding due to direct invasion and perforation into the ileum (which is another rare presentation) treated by complete excision of the tumor with bowel resection and end-end anastomosis.

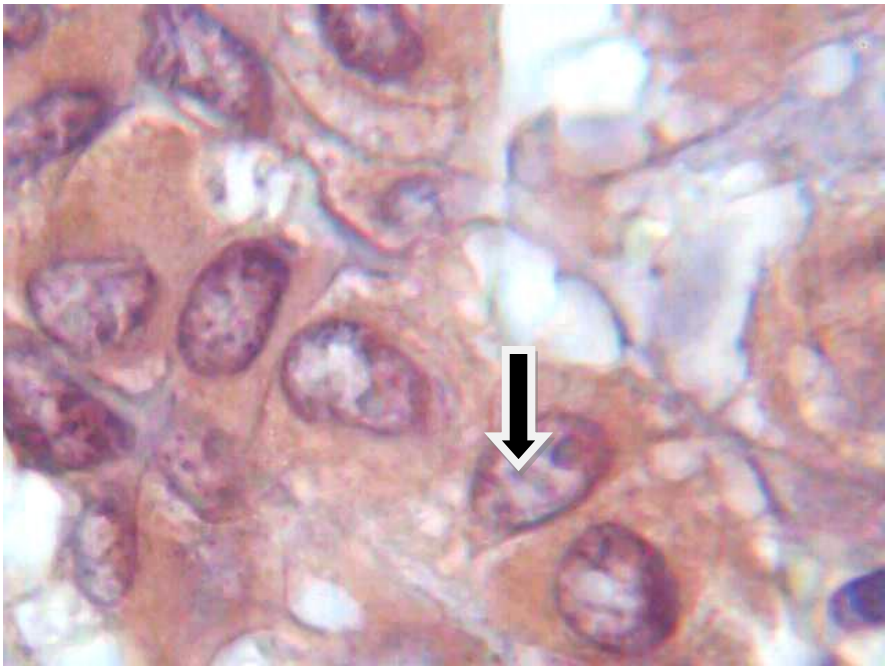

Figure 3 : immunohistochemical photograph shows AFP staining of the hyperchromatic hepatocyte.

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