Pancreatic Hepatoid Adenocarcinoma with Liver Metastasis

Mahta Salehi, MD, Nneka Nwachukwu, MD, Valeria Grijalva, MD, Paul Weinstein, MD,
Forugh Homayounrooz, MD, FACP
Department of Medicine, Stamford Hospital, St

INTRODUCTION

- Hepatoid Adenocarcinoma (HAC) is a rare form of extrahepatic neoplasm with similar morphologic features of Hepatocellular Carcinoma (HCC) and with hepatocyte differentiation.
- The most common site is the stomach, presumably because of the same embryonic origin with liver.
- HAC with pancreatic origin is extremely rare and the exact incidence is unknown.
- It may be metastatic at presentation, most commonly liver, lymph nodes, and lungs.
- Diagnosis is mainly histological, with features of eosinophilia, granularity and hyaline globules within the cytoplasm of involved cells.

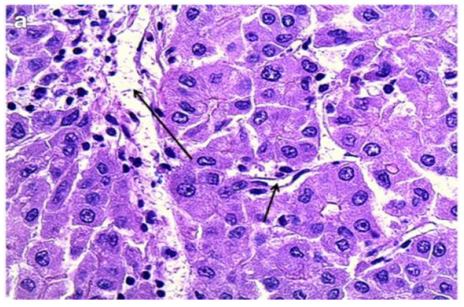

Fig 1: Polygonal cells with granular eosinophilic cytoplasm, centrally located nuclei, and prominent nucleoli. Capillary (arrow)

- HAC and HCC often share similar serological, morphological and immunohistochemical (IHC) characteristics such as elevated α-fetoprotein (AFP), HepPar-1, glypican-3, arginase, or albumin. This makes it very challenging to differentiate HAC from HCC.

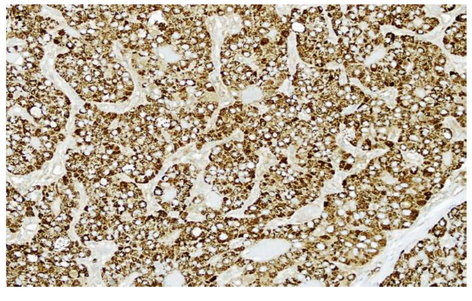

Fig 2: Hepatoid carcinoma of the pancreas. The tumor cells are strongly and diffusely reactive for hepatocyte-specific antigen by IHC staining.

CASE PRESENTATION

A 65-year-old woman presented with weakness, epigastric pain, nausea, and vomiting for a month and black, tarry stools for three weeks, and unintentional weight loss of 20 pounds over three months. Vitals on presentation was unremarkable. Physical exam significant for generalized jaundice and tenderness of RUQ, LUQ and epigastrium.

Diagnostic Tests and Imaging:

Laboratory Tests	Results
Total Billirubin	3.8 mg/dl (0.2-1.2 mg/dL)
Direct Bilirubin	2.6 mg/dl (0.0-0.2 mg/dL)
AST	311 U/L (0-34 U/L)
ALT	391 U/L (17-52 U/L)
ALP	1180 U/L (45-129 U/L)
AFP	2.6 ng/mL (10-20 ng/mL)
CA 19-9	30327 U/mL (0-37 U/mL)
CEA	38 ng/mL (0.0-2.5 ng/mL)

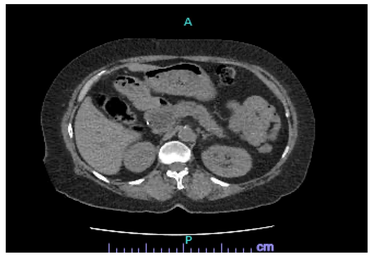

Fig 3
CT scan with evidence of 5.5cm heterogeneous lesion in the pancreas head

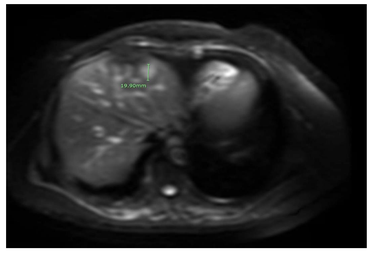

Fig 4
MRCP-- Diffusion weighted imaging (DWI) – hyperintense 2cm lesion in the left lobe of the liver

Fine needle biopsy of the liver mass→ HCC.
Endoscopic ultrasound→ pancreatic head mass with encasement of surrounding superior mesenteric veins and ampulla wall.
Biopsies of the pancreatic mass and ampulla walls→ pancreatic adenocarcinoma.

CASE PRESENTATION

- Due to the rarity of having co-existing primary HCC and pancreatic adenocarcinoma, hepatic mass biopsy was sent for external evaluation which confirmed metastatic HAC from pancreatic origin.
- Patient was treated with Gemcitabine and Paclitaxel with plans to transition to Fulfirinox. Her course was shortly after complicated by pulmonary embolism from bilateral DVTs and was started also on enoxaparin with IVC filter placement.

CONCLUSION

- HAC is an uncommon extrahepatic tumor with high tendency for invasion and metastasis.
- Prefers the liver and lymph nodes as sites of spread.
- Accurate diagnosis requires a combination of clinical, biochemical, radiologic, histopathologic and IHC analysis.
- HAC has an overall poor prognosis given aggressiveness and high likelihood to metastasize.
- Patient has experienced a complicated course given recurrent re-admissions to the hospital for symptoms related to her cancer in addition to pulmonary emboli.

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