

Hepatoid Adenocarcinoma of the Pancreatic Head

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INTRODUCTION

Hepatoid carcinoma (HC) of the pancreas is a rare malignancy with only 34 cases reported in the literature. HC displays morphological and serological features similar to hepatocellular carcinoma and may arise in organs derived from the foregut endoderm, such as the pancreas. We present a case of a man with unresectable HC of the pancreatic head who presented with painless jaundice and weight loss.

CASE REPORT

A 58-year-old White man presented with a history of painless jaundice, scleral icterus, and 3 months of 20-pound unintentional weight loss. Laboratory tests revealed a total bilirubin of 31.6 mg/dL, alkaline phosphatase of 424 mg/dL, carcinoembryonic antigen of 291.9 ng/mL, and CA 19-9 of 120.3 U/mL. A 6 cm mass in the pancreatic head was seen on computed tomography (Figure 1). The patient underwent endoscopic ultrasound with fine-needle aspiration of the mass and endoscopic retrograde cholangiography with biliary stenting to relieve the obstruction (Figures 2 and 3). Immunohistochemical studies revealed the mass to be cytokeratin-7, periodic acid-Schiff-diastase, carcinoembryonic antigen, and HepPar-1-positive, consistent with HC of the pancreas. Pathology reports identified malignant polygonal cells with abundant eosinophilic cytoplasm characteristic of HC¹ (Figure 4). His tumor was staged as T3N2M0. Imaging studies demonstrated involvement of the portal vein and was therefore not



Figure 1. Computed tomographic image with intravenous contrast at the time of initial presentation showing the 4.6 × 5.3 × 6 cm mass in the pancreatic head.

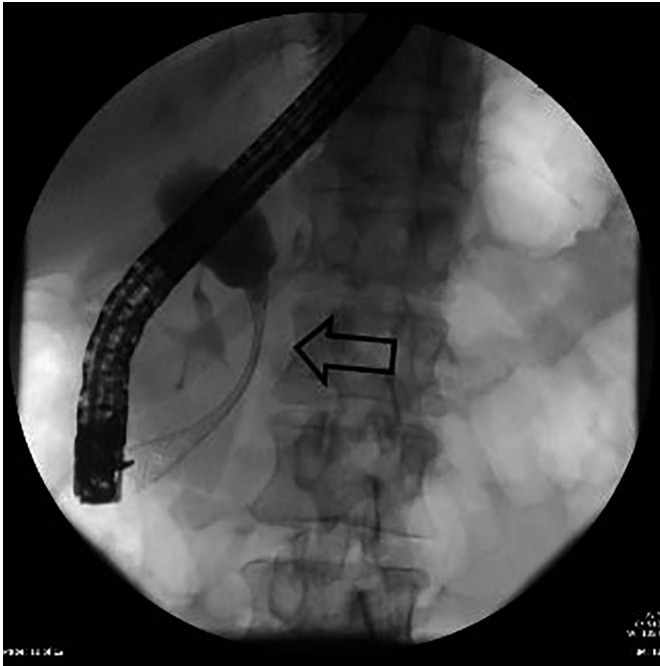


Figure 2. Fluoroscopic image of esophagogastroduodenoscopy endoscopic depicting bile flow through the common bile duct after successful placement of a 0.035 in \times 260 cm straight Dreamwire stent to alleviate biliary obstruction (open arrow).

a surgical candidate (Figure 3). Chemotherapy was started; however, treatment failed and his cancer metastasized. He subsequently developed recurrent biliary obstruction and malignant gastric outlet obstruction. These were treated with repeat biliary stenting and placement of a duodenal stent. Unfortunately, the disease progressed and he died 10 months after initial presentation.



Figure 3. Endoscopic ultrasound showing an irregular, hypoechoic, hyperechoic, and heterogeneous pancreatic head mass that measured 61 \times 51 mm in a maximal cross-sectional diameter (solid arrow). There was sonographic evidence of abutment to the portal vein (open arrow).

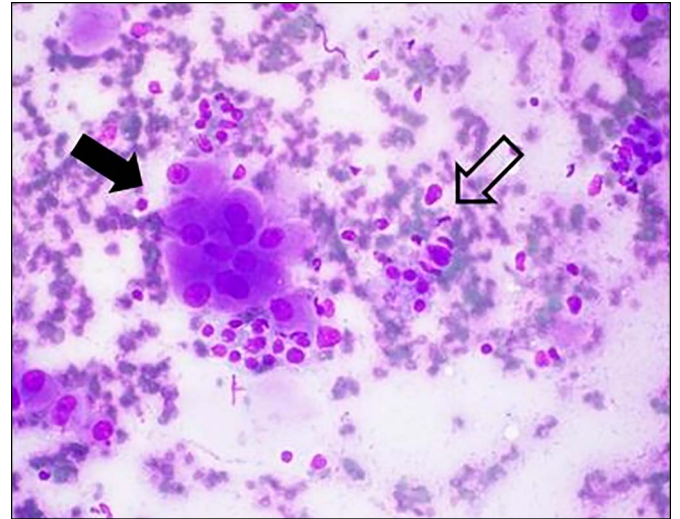


Figure 4. H&E stained image clearly showing normal pancreatic ductal epithelial cells (open arrow) in comparison with malignant polygonal cells with their abundant eosinophilic cytoplasm (solid arrow), which is consistent with previous pathological reports of hepatoid carcinoma.

DISCUSSION

HC of the pancreas is a rare and aggressive cancer with no known etiology or standardized treatment regimen.^{2,3} Explanations in the literature include origin from ectopic liver tissue or transdifferentiation. Patient prognosis depends on the stage at diagnosis and the absence or presence of hepatic vascular involvement.⁴ To date, all documented cases of unresectable HC led to patient death within 1 year of diagnosis. Diagnosis is made with a combination of clinical, laboratory, imaging, and immunochemical features. Further study is needed to develop palliative endoscopic treatment guidelines to treat associated biliary and gastric outlet obstructions in patients who are not surgical candidates and adjuvant therapy options.

DISCLOSURES

Author contributions: A. Holt wrote the manuscript, reviewed the literature and is the article guarantor. M. Licata provided the pathology images with accompanying descriptions. I. Papadopoulos reviewed the literature and provided the endoscopic and other images.

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Disclaimer: The views expressed are the authors' and do not reflect the official policy of the Department of the Army, the Department of Defense, or the US Government.

Informed consent could not be obtained from the family of the deceased. All identifying information has been removed from this case report to protect patient privacy.

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