



Testicular seminoma metastasis to pancreas: a rare cause of obstructive jaundice

Mohit Girotra, Niraj Jani, Javaid M Khan, Viplove Senadhi, Sudhir K Dutta

Testicular cancer represents the most common malignancy in men from age 15–35 years. The North American standard classification¹ divides testicular cancers into Germ cell tumours (GCT) and Non-Germ cell tumours. The lymphatic spread² of GCT usually involves the retroperitoneal lymph nodes.³ However, this spread to retroperitoneum rarely involves the upper gastrointestinal tract.

Case report:

A 43-year-old African-American man presents to the ER with right upper quadrant abdominal pain and pruritus of 2-week duration. He also had dark stools and increasing constipation. On exam, notable findings included icteric sclera, right upper quadrant and epigastric tenderness. Laboratory studies revealed a total bilirubin of 6.3mg/dl, AST/ALT of 52/143 units/L, and ALP of 408 units/L. CT abdomen showed a large soft tissue mass at the 2nd and 3rd portions of the duodenum with intra and extra-hepatic biliary dilatation

At endoscopy, the entire second portion of the duodenum was found to be ulcerated, friable, and the major papilla could not be identified (Figure 1). EUS revealed a 5-cm hypoechoic lesion extending from the pancreatic head to the duodenum with a grossly dilated bile duct upstream (Figure 2). ERCP was attempted for biliary decompression followed by EUS-FNA for staging and diagnosis. The patient had a percutaneous transhepatic catheter placed for biliary decompression. Endoscopic biopsy and cytology specimens of pancreatic mass revealed a poorly differentiated neoplasm with features resembling testicular seminoma (Figure 3). Immunostains for hPLAP (human Placental Alkaline Phosphatase) positivity confirmed metastatic seminoma.

As his bilirubin decreased, he began to feel better and was then started on chemotherapy. He was readmitted 2 months later for massive upper GI bleed and EGD showed a bleeding duodenal mass near the ampulla. Haemostasis was achieved with a heat probe application and an epinephrine injection. Tagged RBC scan showed no specific bleeding site to embolise. He underwent a right hepatic artery ligation and a pylorus sparing Whipple procedure (R0 resection). The patient was discharged home after 3 weeks and continued on adjuvant therapy with chemo and radiation.

The patient had initially presented 1 year back with right lower quadrant abdominal pain radiating to his groin with a swollen and tender right testicle (6cm). He underwent a right inguinal orchiectomy and was found to have T3N0M0 testicular seminoma. Chemotherapy and radiation were recommended but the patient did not pursue.

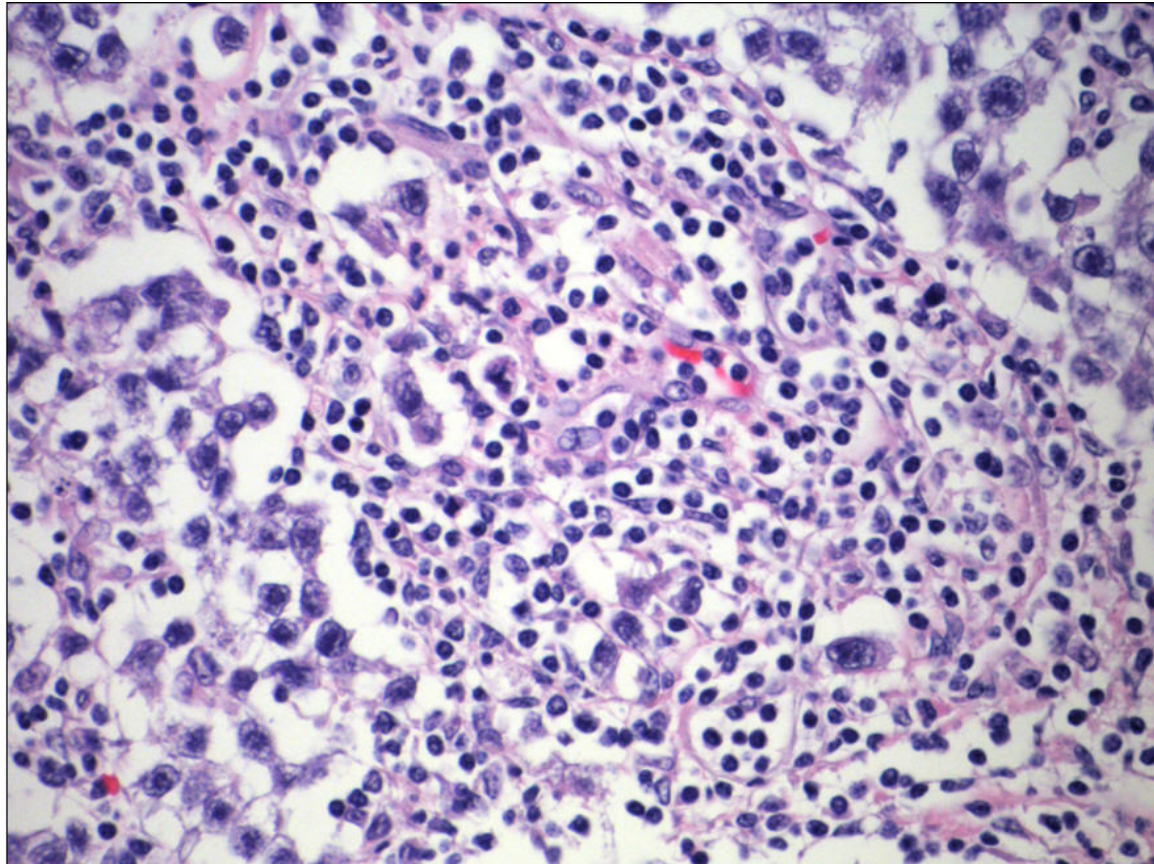
Figure 1. Endoscopic appearance of pancreatic tumour in the 2nd and 3rd part of duodenum, loss of duodenal papilla



Figure 2. Endoscopic ultrasound appearance of pancreatic tumour



Figure 3. Pathology slide of pancreatic mass showing the features of testicular seminoma



Discussion

GCT metastasis to the upper gastrointestinal (GI) tract is uncommon (<5%). Non-seminomatous GCT is much more likely to spread to the GI tract than seminomas.⁸ A case series from Memorial Kettering described 16 cases of metastatic pancreatic cancers, but none of them were testicular in origin.⁹ Another postmortem case series did not document any purely seminomatous tumours metastasising to the upper GI tract⁷.

Our patient was initially diagnosed with testicular cancer and underwent surgical orchiectomy, but refused any post-operative chemotherapy and radiation. The tumour was T3N0M0 and no evidence of metastases was noted at that time. He later presented with obstructive jaundice, and was found to have a large pancreatic head mass pressing into the duodenum. The pathology and immunostaining of the mass was consistent with patient's earlier diagnosis of testicular seminoma. He was started on chemotherapy with BEP (bleomycin, etoposide, and cisplatin) and responded well, with decrease in size of the mass on serial CT scans and also symptomatic relief from his jaundice. He later had GI bleed, which is a common complication of GI tumours, and underwent Right hepatic artery ligation followed by R0 Whipple's resection.

Later adjuvant therapy with chemo and radiation were continued and patient responded well.

Seminoma is a highly chemosensitive tumour and modern chemotherapeutic regimens (BEP) have shown high success rates.¹⁰ Most cases of metastases have been documented in patients not receiving chemotherapy. Our case is unique in being the first to report pancreatic metastasis of testicular seminoma, and emphasises the importance of adjuvant therapy (chemo/radiation therapy) following the surgical resection of large testicular tumours to prevent future complications and metastases.

Author information: Mohit Girotra, Viplove Senadhi, Javaid M Khan, Internal Medicine Residents, Johns Hopkins University/Sinai Hospital Program, Baltimore; Niraj Jani, Assistant Professor of Medicine, Johns Hopkins University School of Medicine, Baltimore; Sudhir K Dutta, Professor of Medicine, University of Maryland School of Medicine, Baltimore, MD, USA

Correspondence: Mohit Girotra, M.D., Division of Gastroenterology, Morton Mower Medical Office Building, Suite 305, Sinai Hospital of Baltimore, Baltimore, MD 21215, USA. Fax: +1 (410) 6015757; email: girotra.mohit@gmail.com

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