

The Computed Tomography “Sandwich Sign” for Primary Pancreatic Lymphoma

Brett Hughes, MD¹, Naomi Habib, MD¹, and Keng-Yu Chuang, MD²

¹Creighton University/St. Joseph's Hospital and Medical Center Internal Medicine Residency, Phoenix, AZ

²Department of Gastroenterology, Creighton University/St. Joseph's Hospital and Medical Center, Phoenix, AZ

CASE REPORT

A 54-year-old woman presented to the emergency department with 2 weeks of progressive abdominal pain. Physical examination noted scleral icterus and epigastric tenderness. Laboratory tests demonstrated alanine transaminase 1,077 U/L, aspartate transaminase 798 U/L, total bilirubin 3.5 mg/dL, and lipase 622 U/L. The diagnosis of acute biliary pancreatitis was performed. An abdominal ultrasonography and computed tomography showed an uncinate process mass with central necrosis measuring $6.8 \times 2.9 \times 3.8$ cm (Figure 1). The common bile duct was dilated to 10 mm with abrupt tapering of the distal duct. The pancreatic duct was mildly dilated to 3.5 mm. Also noted was a large irregular superior mesenteric lymph node measuring 11×6 cm, which appeared to be continuous with the pancreatic mass. Despite extensive lymphadenopathy, the mesenteric vessels appeared relatively normal. The pancreatic mass and lymph node were biopsied by endoscopic ultrasound (EUS), which showed diffuse large B cell lymphoma (Figure 2). Endoscopic retrograde cholangiopancreatography was performed for biliary decompression. Bone marrow biopsy revealed no lymphoma. The patient was started on R-CHOP therapy and responded well. She is now back to her baseline laboratory values.

Given its extremely low incidence, primary pancreatic lymphoma (PPL) is poorly understood. One review of the Surveillance, Epidemiology, and End Results database only identified 523 cases from 1973 to 2007.¹ Most patients present similarly to the case described above. The key differences between PPL and pancreatic adenocarcinoma are a larger tumor size; lack of significant pancreatic duct dilation, necrosis, or vascular invasion²; and normal CA 19-9 levels. Imaging of the abdomen also reveals significant differences between PPL and adenocarcinoma, with PPL frequently demonstrating the “sandwich sign,” when a mesenteric mass appears as lymphadenopathy surrounding both sides of the mesenteric vessels, which remain spared. Although the sign itself is not specific to PPL, it is specific for mesenteric lymphomas, and with pancreatic involvement, PPL should be considered.⁴⁻⁶ Recognition of these characteristic findings is important because PPL carries a significantly different prognosis from other pancreatic malignancies and typically responds well to chemotherapy.



Figure 1. The “sandwich sign” in abdominal computed tomography. (A) Axial view and (B) coronal view showing mesenteric vessels (arrow) sandwiched between the large lymphoma tumors (*).

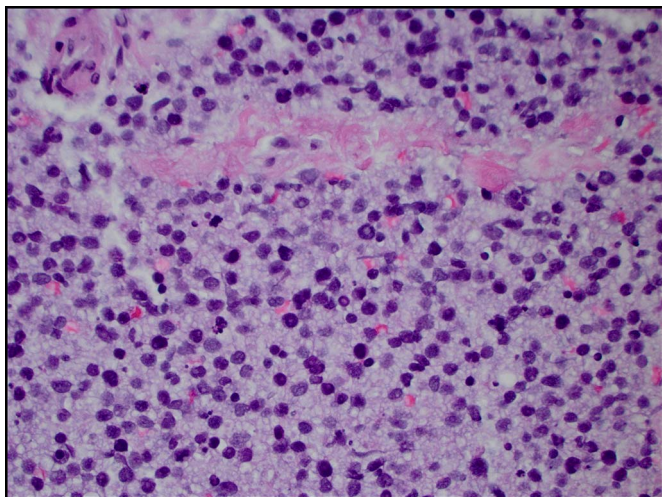


Figure 2. Hematoxylin & eosin staining showing pancreatic diffuse large B cell lymphoma.

DISCLOSURES

Author contributions: B. Hughes wrote and edited the manuscript, collected data, and is the article guarantor. N. Habib edited the manuscript and reviewed the literature. K. Chuang edited the manuscript and collected data.

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Informed consent was obtained for this case report.

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