

Contrast-enhanced CT findings of primary pancreatic lymphoma with bilateral renal involvement

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A 13-year-old girl presented with a one-month history of jaundice, abdominal pain, and weight loss. Contrast-enhanced computed tomography (CECT) showed a hypoenhancing pancreatic head mass encasing the portal vein and superior mesenteric artery without vascular occlusion (Figure 1A). At a higher axial level, intrahepatic biliary ductal dilatation and hepatosplenomegaly, consistent with distal biliary obstruction, were observed (Figure 1B). Coronal reformatted images showed multiple

bilateral, rounded, hypoenhancing renal parenchymal masses, compatible with lymphomatous renal involvement (Figure 2A). The pancreatic head mass was associated with intrahepatic and extrahepatic biliary ductal dilatation (Figure 2B). No significant retroperitoneal or peripancreatic lymphadenopathy was identified. Ultrasound-guided biopsy of a renal lesion revealed B-cell lymphoblastic lymphoma. The diagnosis was primary pancreatic lymphoma (PPL) with bilateral renal involvement.

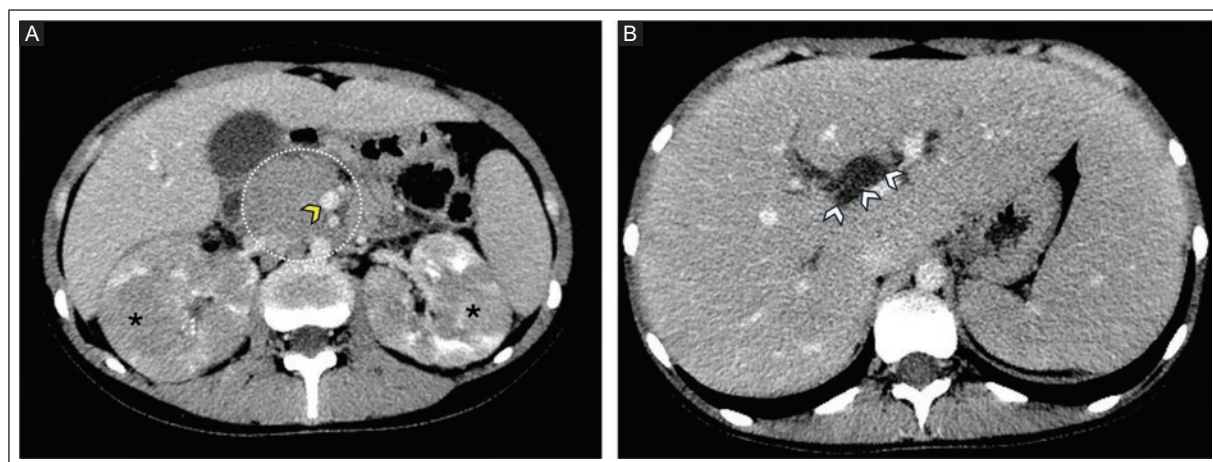


Figure 1. A 13-year-old girl was evaluated for a one-month history of jaundice, abdominal pain, and weight loss. **A:** axial CECT image shows a hypoenhancing mass in the pancreatic head (dashed circle) with encasement of the portal vein (yellow arrowhead) and the superior mesenteric artery. Multiple bilateral hypoenhancing renal parenchymal masses are also present (asterisks). **B:** CECT image at a more cranial level shows hepatosplenomegaly and marked intrahepatic biliary duct dilatation (white arrowheads). An ultrasound-guided biopsy of a renal lesion revealed B-cell lymphoblastic lymphoma. The diagnosis was PPL with bilateral renal involvement.

CECT: contrast-enhanced computed tomography; PPL: primary pancreatic lymphoma.

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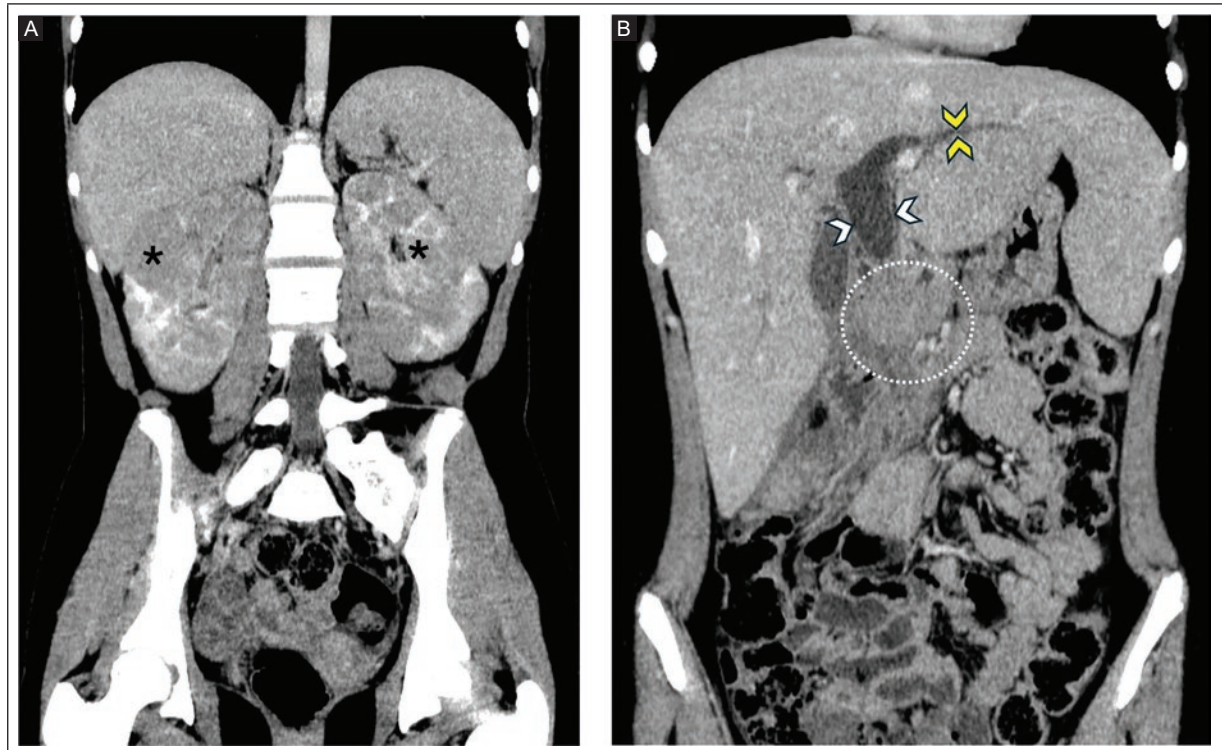


Figure 2. A 13-year-old girl was evaluated for a one-month history of jaundice, abdominal pain, and weight loss. **A:** coronal CECT reconstruction shows bilateral renal involvement with multiple rounded, hypoenhancing parenchymal masses (asterisks), consistent with lymphomatous infiltration. **B:** coronal CECT reconstruction shows a hypoenhancing mass in the pancreatic head (dashed circle), with intrahepatic (yellow arrowheads) and extrahepatic (white arrowheads) biliary duct dilatation, consistent with distal biliary obstruction. Hepatosplenomegaly is present. The diagnosis was PPL with bilateral renal involvement.

CECT: contrast-enhanced computed tomography; PPL: primary pancreatic lymphoma.

PPL is a rare neoplasm, particularly in the pediatric population¹. It poses a diagnostic challenge because of its clinical and imaging similarities to other pancreatic lesions, primarily pancreatic adenocarcinoma². An accurate diagnosis is crucial because treatments differ significantly: PPL responds well to chemotherapy, whereas adenocarcinoma requires surgical resection³. CECT findings, such as a bulky mass that encases vessels without occlusion and the absence of significant pancreatic ductal dilatation, help differentiate PPL from adenocarcinoma^{3,4}. Although PPL itself is uncommon, its presentation can be even more atypical, as demonstrated by rare cases of simultaneous bilateral renal involvement, which further underscores its diagnostic complexity⁵.

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Conflicts of interest

The authors declare no conflicts of interest.

Ethical considerations

Protection of human subjects and animals. The authors declare that no experiments on humans or animals were performed for this research.

Confidentiality, informed consent, and ethical approval. The authors have followed their institution's confidentiality protocols for sharing patient data. Informed consent was not required to analyze and publish routinely acquired clinical and imaging data.

Declaration on the use of artificial intelligence.

The authors declare that no generative artificial intelligence was used in the writing or creation of the content of this manuscript.

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