

Primary pancreatic lymphoma: endoscopic ultrasound-guided Trucut biopsy to the rescue!



Fig. 1 Biphasic abdominal computed tomographic images revealed a poorly defined mass at the junction of the body and the head of the pancreas that measured 4.5 cm in diameter, and an incidental hepatic cyst.

A 64-year-old diabetic woman presented with a 1-week history of abdominal pain and cholestatic jaundice. Her laboratory tests showed: leukocyte count $7.2 \times 10^9/L$ (normal range $3.5 - 10.5 \times 10^9/L$), total bilirubin $10.5 \mu\text{g/dL}$ ($0.1 - 1.0 \mu\text{g/dL}$), aspartate aminotransferase (AST) 337 U/L ($12 - 31$ U/L), alanine aminotransferase (ALT) 624 U/L ($9 - 29$ U/L), alkaline phosphatase 724 U/L ($50 - 130$ U/L), lipase 24 U/L ($10 - 73$ U/L), CA 19-9 28 units/mL (< 55 units/mL) and IgG4 137 mg/dL ($8 - 140$ mg/dL). Abdominal computed tomography revealed a pancreatic head mass that was encasing the portal vein and common hepatic artery but sparing the superior mesenteric artery, with evidence of peripancreatic and portal lymphadenopathy; there was no evidence of hepatic or splenic involvement (▶ **Fig. 1**). Her chest radiograph was normal. Endoscopic ultrasound (EUS) revealed a 4.3-cm, echo-poor pancreatic head mass and a 1.4-cm (short axis) peripancreatic lymph node (▶ **Fig. 2, 3**). EUS-guided fine-needle aspiration (EUS-FNA) of the pancreatic head and of the peripancreatic lymph node was performed.

The patient was diagnosed with primary pancreatic lymphoma. EUS-FNA of the pancreatic mass revealed very unusual atypical large lymphocytes, an appearance suspicious of but not diagnostic for large B-cell lymphoma (▶ **Fig. 4**). A Trucut biopsy of a cytologically suspicious



Fig. 2 Linear endoscopic ultrasound revealed a solid, echo-poor mass involving the pancreatic head and body.

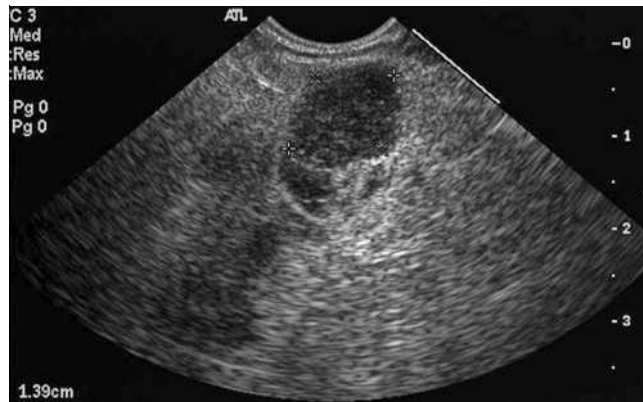


Fig. 3 Linear endoscopic ultrasound image of a large (1.4 cm) peripancreatic lymph node.

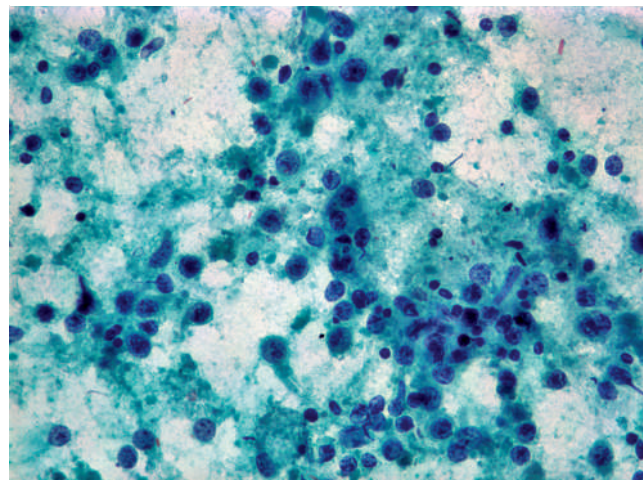


Fig. 4 A pancreatic fine-needle aspiration smear showing large, atypical, malignant lymphoid cells with scattered small lymphocytes (Papanicolaou stain, original magnification $\times 400$).

peripancreatic node confirmed the diagnosis (▶ **Fig. 5**). Immunoperoxidase studies of the Trucut biopsy tissue demonstrated large atypical lymphoid cells that were positive for CD45 and CD20 (▶ **Fig. 6**). The patient's bone marrow examination was normal.

Primary pancreatic lymphoma accounts for less than 1% of extranodal non-Hodg-

kin's lymphomas, of which 58% are of the large-cell type [1]. Diagnosis and subtyping can be achieved by EUS-FNA with adjuvant flow cytometry [2–4]. As EUS-FNA can fail to establish a definitive diagnosis of lymphoma, a Trucut biopsy can yield useful diagnostic and prognostic information, excluding carcinoma for example [5]. This case serves as a reminder that

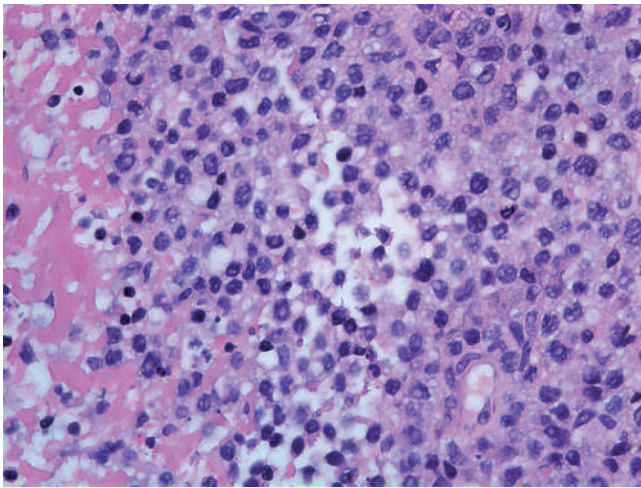


Fig. 5 Histological examination of the Trucut biopsy of the lymph node showed sheets of non-cohesive, large neoplastic cells with necrosis (on the left of the image) (hematoxylin and eosin stain, original magnification \times 400).

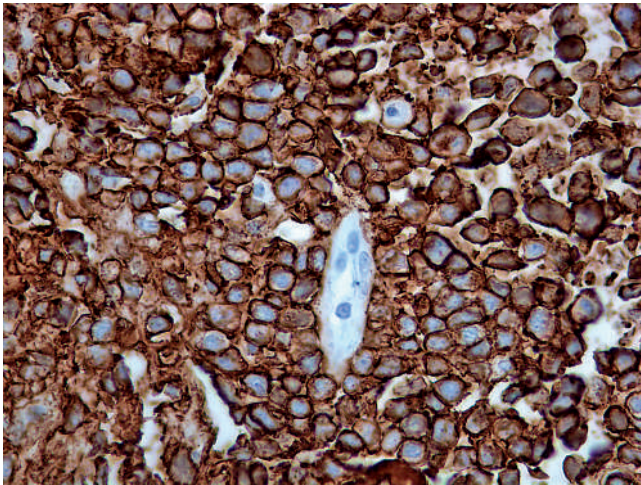


Fig. 6 Immunohistochemical staining showed the malignant cells to be positive for CD20 (original magnification \times 400).

EUS Trucut biopsies can be useful as an adjunctive rescue technique when standard cytological techniques are inconclusive.

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