

Pancreatic head mass of unusual etiology: multiple myeloma diagnosed by endoscopic ultrasound-guided fine needle aspiration

Pancreatic involvement in multiple myeloma (MM) is a rare event and can occur as a primary isolated form or as secondary manifestation of systemic disease. The endoscopic ultrasound (EUS) features of this entity have not been described.

A 64 year-old woman presenting with anemia, renal insufficiency, and multiple lytic bone lesions was diagnosed as having kappa light chain multiple myeloma. She was prescribed doxorubicin, dexamethasone, and thalidomide, and showed a good response. She then underwent autologous stem cell transplantation (ASCT) and stayed in remission for 9 months. Later, an abdominal ultrasound was performed for abnormal liver enzymes, and was suspicious for a pancreatic head mass. This was confirmed by abdominal computed tomography, which revealed a 35-mm pancreatic head mass (▶ Fig. 1).

There was no evidence of biliary or pancreatic duct dilatation. CA 19.9 levels were normal. She was then referred to our institution for further evaluation. EUS with a linear echoendoscope (Olympus Medical Systems Corp., Tokyo, Japan) showed a 4-cm heterogeneous, overall hypoechoic pancreatic head mass. This lesion was in close proximity with the superior mesenteric vein just below the confluence, although the vascular adventitia appeared to be preserved (▶ Fig. 2). The common bile duct was not dilated. EUS fine-needle aspiration (EUS-FNA) was carried out with a 22-gauge needle (Olympus Medical Systems Corp., Tokyo, Japan), with a total of three passes (▶ Fig. 3).

The consistency of the mass was noted to be medium hard. FNA smears and cell-block sections showed a homogeneous plasma cell population with occasional multinucleated cells and discrete nuclear atypia. The cells were strongly immunoreactive for CD38 and CD138 and negative for CD79a (▶ Fig. 4).

Serum/urine electrophoresis and a myelogram did not show any evidence of relapse and the patient was referred for radiation therapy.

Extramedullary multiple myeloma (MM) involvement is not an uncommon presentation, occurring in 10%–15% of pa-

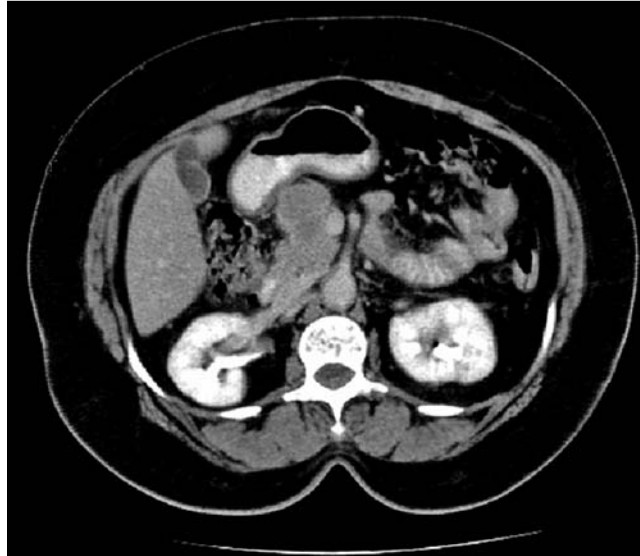


Fig. 1 Abdominal computed tomographic (CT) scan showing a hypovascular, 35-mm pancreatic head mass.

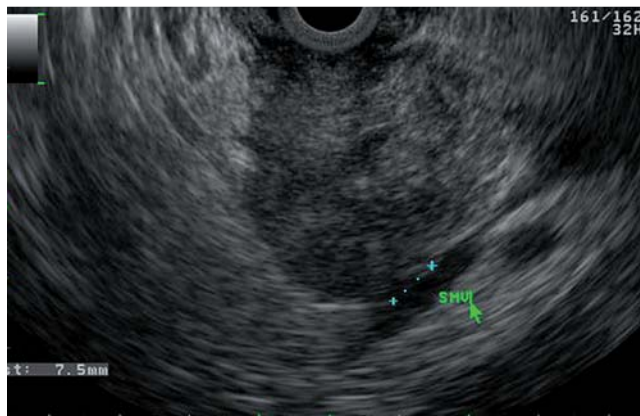


Fig. 2 Endoscopic ultrasound showing a heterogeneous, hypoechoic pancreatic head mass in close proximity to the superior mesenteric vein (SMV).



Fig. 3 Endoscopic ultrasound guided fine-needle aspiration.

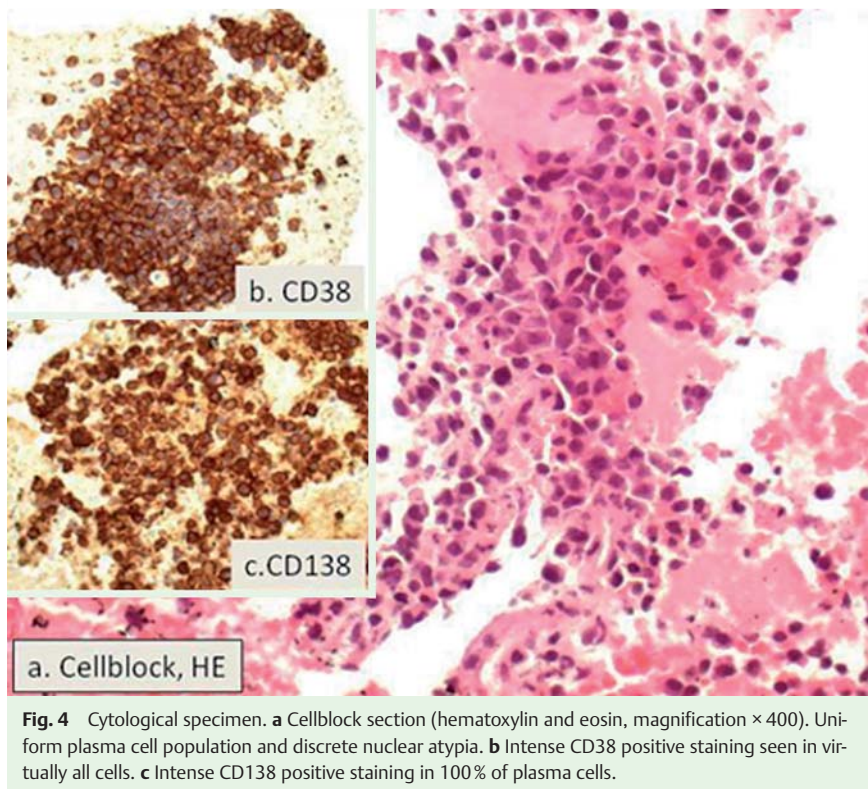


Fig. 4 Cytological specimen. **a** Cellblock section (hematoxylin and eosin, magnification $\times 400$). Uniform plasma cell population and discrete nuclear atypia. **b** Intense CD38 positive staining seen in virtually all cells. **c** Intense CD138 positive staining in 100% of plasma cells.

tients. To date, fewer than 30 cases of extramedullary plasmacytomas involving the pancreas have been reported [1], with an estimated prevalence rate of 2.3% based on autopsy studies [2]. Although the head of the pancreas is usually involved, with most cases reported as large masses (> 4 cm) presenting with obstructive jaundice, other pancreatic locations and diffuse involvement have also been described. When carried out for biliary obstruction, endoscopic retrograde cholangiopancreatography (ERCP) usually demonstrates smooth intrapancreatic biliary stenosis [3]. According to the literature, the patterns of multiple myeloma relapse after ASCT differ from the presenting clinical scenario and there are now a few reports of extramedullary relapses. To the best of our knowledge, there has only been one case report of pancreatic relapse in this setting [4].

EUS-FNA has a proven record for staging pancreatic cancer and for cytological evaluation. About 6% of cytology results are “atypical”, that is, they do not have features of pancreatic adenocarcinoma [5]. The cytological/histological diagnosis in the majority of cases reporting multiple myeloma of the pancreas have been based on surgical specimens/surgical biopsies, imaging-guided percutaneous biopsy, and postmortem evaluation. We could find only one report in which EUS had been carried out, although no description of the procedure or images were provided [6]. In summary, pancreatic mass in the setting of multiple myeloma, especially after ASCT, should alert the clinician to the possibility of extramedullary disease.

Competing interests: None

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