
Case 66: Pseudomass of the Pancreas Associated with Bowel Malrotation

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Clinical History

57-year-old woman with incidentally discovered pancreatic head mass for work-up of myasthenia gravis.

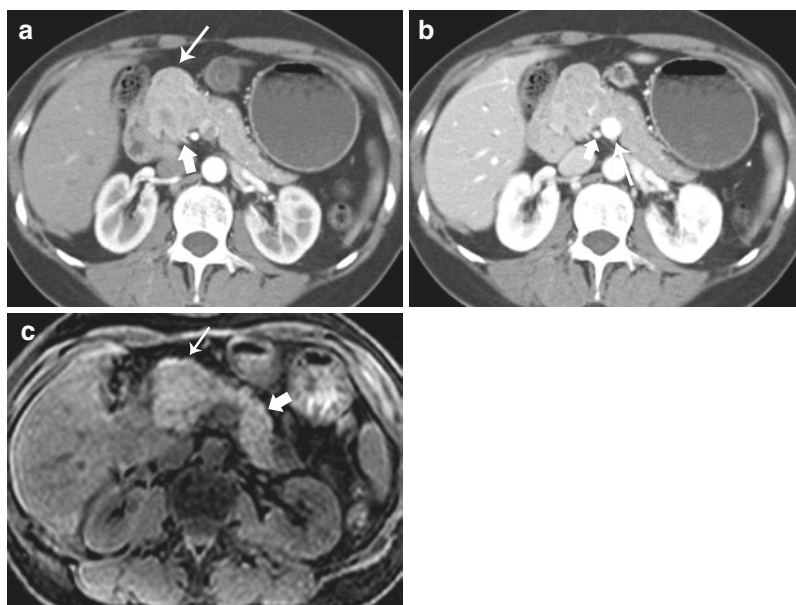


Fig. 1

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Imaging Findings

Axial contrast-enhanced arterial phase CT demonstrates globular enlargement of the pancreatic head (Fig. 1a, *thin arrow*). There is aplasia of the uncinate process (Fig. 1a, *thick arrow*). Axial contrast-enhanced venous phase CT demonstrates inversion of the superior mesenteric artery (Fig. 1b, *thick arrow*) and superior mesenteric vein (Fig. 1b, *thin arrow*) positioning. The attenuation and enhancement of the pancreatic head is similar to the adjacent pancreatic parenchyma on both phases. There was absence of jejunal loops in the left upper abdomen which were present in the left abdomen along with large bowel malrotation (images not shown). Pre-contrast T1-weighted image (c) demonstrates no difference in the signal intensity of the pancreas in the head (Fig. 1c, *thin arrow*) and the tail (Fig. 1c, *thick arrow*) regions.

Differential Diagnosis

Neuroendocrine tumor, pseudomass associated with bowel malrotation.

Diagnosis

Pseudomass of the pancreatic head associated with bowel malrotation.

Discussion

Bowel malrotation is a congenital abnormality that is usually an incidental finding in adults imaged for nonspecific abdominal pain [1]. The imaging findings are the presence of a right-sided small bowel, left-sided large bowel, and reversed orientation of the superior mesenteric vessels. Complete bowel malrotation is also associated with pancreatic contour abnormalities such as aplasia/hypoplasia of the uncinate process (Fig. 1) and a short pancreas [2]. Aplasia/hypoplasia of the uncinate process is the most common pancreatic abnormality in these patients and is also associated with contour abnormalities of the pancreatic head that can mimic a mass [3]. These abnormalities include globular pancreatic head with excess pancreatic tissue present anteriorly (Fig. 1), elongated head with excess tissue present laterally, or a combination of the two. The pseudomass has attenuation and enhancement similar to the adjacent normal pancreatic parenchyma. Similarly, the T1 signal intensity of the pseudomass is similar to the normal pancreatic parenchyma on the T1-weighted fat-saturated images (Fig. 1c).

The patient illustrated in Fig. 1 underwent pancreaticoduodenectomy and pathology demonstrated normal pancreatic tissue.

Teaching Point

Bowel malrotation is associated with variations in pancreatic contour which should not be confused with a pancreatic tumor.

References

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2. Zissin R, Rathaus V, Oscadchy A, Kots E, Gayer G, Shapiro-Feinberg M. Intestinal malrotation as an incidental finding on CT in adults. *Abdom Imaging.* 1999;24(6):550–5.
3. Chandra J, Grierson C, Bungay H. Normal variations in pancreatic contour are associated with intestinal malrotation and can mimic neoplasm. *Clin Radiol.* 2012;67(12):1187–92. doi:10.1016/j.crad.2011.11.021.