

Intramural Duodenal Hematoma with Acute Pancreatitis in a Patient With an Overt Pancreatic Malignancy

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Abstract

Intramural hematomas have rarely been associated with pancreatitis, and to date there is only 1 case report of an intramural hematoma occurring with pancreatic adenocarcinoma. We describe a patient who presented with gastric outlet obstruction secondary to a spontaneous intramural duodenal hematoma and was found to have a pancreatic adenocarcinoma on endoscopic ultrasound (EUS) after it was not visualized by computed tomography (CT).

Introduction

Intramural duodenal hematomas were first described in 1838 by MacLauchlan.¹ Non-traumatic hematomas have been associated with anticoagulation, coagulation disorders, and endoscopic hemostasis procedures.¹ Intramural duodenal hematomas can present as mild abdominal pain or obstruction. Most patients improve with non-operative treatment like nasogastric decompression, but surgery may be needed in cases with suspected malignancy or perforation.²

Case Report

A 73-year-old female with past medical history of deep vein thrombosis on warfarin presented with 5 days of severe epigastric pain, nausea, and vomiting. She denied history of abdominal trauma. Laboratory results revealed lipase of 2,000 units/L, normal liver-associated enzymes, and an international normalized ratio (INR) of 2.5. An abdominal computed tomography (CT) showed an 11 x 5 cm intramural hematoma in the second portion of the duodenum, with evidence of gastric outlet obstruction and a dilated main pancreatic duct (MPD) in the pancreatic body and tail (Figure 1). No distinct pancreatic mass lesions were detected on imaging studies, and it was thought that MPD dilation may be due to extrinsic compression from the duodenal hematoma.

She was treated with supportive care for acute pancreatitis and the warfarin was discontinued. A follow-up CT 1 month later showed continued pancreatic ductal dilation and decrease in the size of the duodenal hematoma to 2 cm (Figure 2). Endoscopic ultrasonography (EUS) showed a 19 x 15 mm, round, hypoechoic, homogenous mass in the pancreatic neck without invasion of any surrounding vessels (Figure 3). EUS-guided fine needle aspiration confirmed a pancreatic adenocarcinoma. The patient underwent a distal pancreatectomy; surgical pathology confirmed a well-differentiated adenocarcinoma without vascular or lymphatic invasion (stage T1N0M0). She was discharged after an uneventful postoperative course and was doing well on her last follow-up visit.

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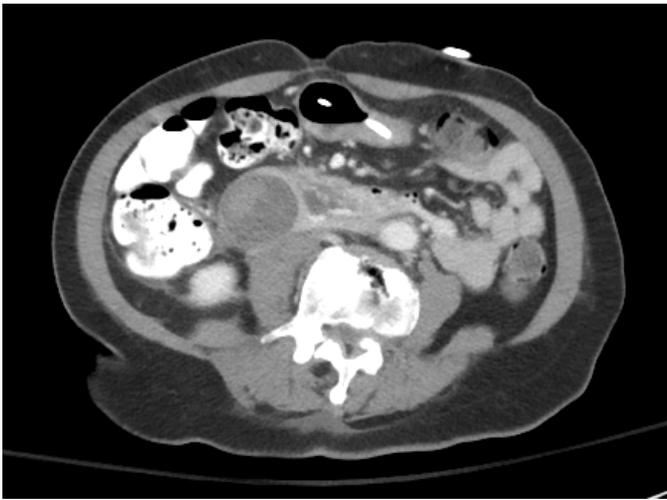


Figure 1. Initial CT showing an 11 x 5 cm intramural duodenal hematoma without any evidence of any pancreatic lesion.

Discussion

Intramural duodenal hematoma is a rare disease, first described in 1838 by MacLauchlan.¹ More than 70% of intramural duodenal hematomas are secondary to blunt abdominal trauma.¹ Nontraumatic intramural duodenal hematoma was first reported by Sutherland in 1904 and is associated with anticoagulation therapy, coagulation disorders, and endoscopic hemostasis.¹ There are rare reports of an association between intramural duodenal hematoma and acute pancreatitis.

Intramural duodenal hematoma may be caused by the proximity of the duodenum to a rich vascular supply and the vertebral column. The third portion of the duodenum has a



Figure 2. Follow-up CT showing interval decrease in the size of the duodenal hematoma to 2 x 2 cm.



Figure 3. EUS showing a round hypoechoic mass in the pancreatic neck.

relatively fixed retroperitoneal position and is adjacent to the lumbar spine, which makes it more prone to shear injury. Patients present with symptoms of abdominal pain, nausea, vomiting, anemia due to blood loss, and, rarely, elevated serum pancreatic enzyme levels due to the compression of the pancreas as the hematoma grows in size.^{2,3} Complications of intramural duodenal hematoma include perforation, pancreatitis, and gastric outlet obstruction. Unless there is perforation requiring surgical management, conservative medical treatment with nasal decompression and parenteral feedings is recommended.⁴

A diagnosis of intramural duodenal hematoma is based on CT; characteristic findings include circumferential wall thickening, intramural hyperdensity, luminal narrowing, and intestinal obstruction. Conservative treatment of intramural duodenal hematoma usually leads to improvement of symptoms within 4–6 days.⁵ Complete resolution usually occurs within 2 months after the onset. Patients who have an intramural duodenal hematoma as a result of anticoagulation can usually safely resume therapy after resolution of the hematoma.⁵

We believe intramural duodenal hematoma may be an unusual presentation of pancreatic adenocarcinoma. In our patient, the intramural duodenal hematoma may have been caused by a combination of anticoagulation therapy, acute pancreatitis, and pancreatic malignancy. Our initial imaging study failed to demonstrate a pancreatic mass, which may have been as a result of imaging distortion from the large intramural duodenal hematoma. However, in cases of pancreatic ductal dilatation, malignancy should always be suspected, and follow-up imaging studies and/or EUS after resolution of the hematoma is recommended in order to rule out a cancer.

Disclosures

Author contributions: All authors were responsible for drafting the manuscript and giving the final review for submission. AA Siddiqui is the article guarantor.

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