Intraduodenal hematoma presenting with small bowel obstruction, pancreatitis, and subsequent obstructive jaundice in a hemophiliac patient

Anas K. Gremida, Matthew Stotts, Bali Gill, Haripriya Maddur

ABSTRACT

Introduction: Intraduodenal hematoma (IDH) is a rare cause of small bowel obstruction. IDH usually results from blunt trauma to the abdomen.

Case Report: We report a case of a 24-year-old male with a history of hemophilia A who presented with intraduodenal hematoma presenting with small bowel obstruction, pancreatitis, and subsequent obstructive jaundice.

Conclusion: Spontaneous intraduodenal hematomas are rare clinical entity warrants high index of suspicion in patients with underlying risk factors such as hemophiliac patients.
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Keywords: Spontaneous intraduodenal hematoma, Pancreatitis, Small bowel obstruction

INTRODUCTION

Intraduodenal hematoma (IDH) is a rare cause of proximal bowel obstruction. Traumatic injury is the most common identifiable cause [1]. Risk factors for spontaneous non-traumatic small bowel hematomas include pancreatitis, bleeding disorders, anticoagulant therapy, vasculitis and bleeding diathesis [2–4]. We report an unusual case of small bowel obstruction, obstructive jaundice, and pancreatitis caused by a spontaneous IDH in a hemophiliac patient.

CASE REPORT

A 24-year-old male with history of hemophilia A presented with abrupt onset of severe epigastric pain, nausea, and coffee ground emesis. He had been non-compliant with his factor VIII infusion and endorsed recent heavy weight lifting. There was no history of direct trauma. On examination, the patient’s vitals were within normal limits. He had hypoactive bowel sounds and tenderness in his epigastric region with no rebound or guarding. The rest of his physical examination was unremarkable. His initial laboratory workup revealed hemoglobin 8.1 g/dL, AST 13 u/L, ALT 10 u/L, alkaline phosphatase of 45 U/L, total bilirubin 0.6 mg/dL, and lipase level was of 1322 mg/dL. A computed tomography (CT) scan of the abdomen revealed an intraduodenal mass measuring 8.1x14x14 cm (Figure 1) extending into the intraperitoneal and retroperitoneal spaces with decompression of the distal small bowel loops and abutting the head of the pancreas. The mass measured 40 HU on the Hounsfield scale which is consistent with a hematoma. A more radiopaque mass in the center with 60 HU reflects a central blood clot. The patient was admitted to the intensive care unit for supportive care. A nasogastric tube was placed for decomposition and
packed red blood cells were transfused in addition to factor VIII (Humate P®) infusion.

On the third day of admission, after the patient was hemodynamically stable, an EGD revealed a Mallory Weiss tear near the cardia and a large hematoma in the lumen of the duodenum. The patient continued to be managed conservatively. On hospital day seven, the patient was noticed to have new onset jaundice, laboratory revealed a total bilirubin of 6.6 mg/dL (direct bilirubin was 5.0 mg/dL), AST 33 u/L and ALT 42 u/L. Computed tomography (CT) scan of the abdomen showed biliary and pancreatic duct dilation which was likely secondary to external compression from the duodenal hematoma. With further conservative management and factor VIII infusions, jaundice resolved with reduction of the hematoma on serial CT scans.

**DISCUSSION**

Intramural duodenal hematoma (IDH) is a rare cause of obstruction of the proximal gastrointestinal tract. Blunt abdominal trauma is the most common cause of IDH, a finding that has been attributed to the duodenum’s relatively fixed location and its rich blood supply [1]. While anticoagulation with warfarin is the most common risk factor for spontaneous non-traumatic intramural bleeding, other causes of non-traumatic IDH include endoscopic biopsies, aneurysms, pancreatitis and bleeding diathesis [2–4].

IDH was first described in 1838 by McLachan in a patient with pseudoaneurysm [5]. In 1908, Van Khautz reported the first case of spontaneous intramural hematoma in a hemophiliac patient [6]. Whereas traumatic small bowel hematomas commonly happen in the duodenum, most spontaneous hematomas tend to involve the jejunum [7, 8]. Our patient had no risk factors which could explain why the bleeding occurred in the duodenum rather than the jejunum. Even though pancreatitis can lead to an intraluminal bleeding, it is very unlikely that pancreatitis can cause such a large hematoma. The clinical presentation of IDH is mostly abdominal pain. Subsequent vomiting may indicate that the hematoma becomes obstructive. Presence of jaundice should raise the suspicion of external compression of the biliary tree, but could also result from hematoma breakdown. Diagnosis of IDH relies largely on clinical suspicion and radiographic studies. The CT scan with contrast is the most useful diagnostic tool in detection of intraluminal hematomas. Hounsfeld units scoring system is a quantitative scale used to describe radiodensity and gives a clue about the nature of the structures on CT scans. Freely flowing blood has a density of 20–45 Hounsfield units (HU), while blood clots are more radiopaque and generally score between 45 and 70 HU [9]. Magnetic resonance imaging (MRI) scan is a good alternative when the enhanced CT scan is not possible, typically showing the characteristic three-layered sign, which is caused by the tendency of hemosiderin to deposit into layers [10]. In hemodynamically stable patients with IDH, the management is usually conservative, which includes bowel rest, bowel decompression, and correction of coagulopathy. Resolution of the hematoma is usually expected within a few weeks which depends on the size of the hematoma [8]. Surgical intervention through laparoscopy or laparotomy is reserved for hemodynamically unstable patients or in cases of perforation or ischemia.

**CONCLUSION**

Spontaneous intraduodenal hematomas are one of the rare causes of intestinal obstruction and pancreatitis in a non-traumatic patients. High index of suspicion is required in patients with bleeding tendency who present with symptoms suggestive of high intestinal obstruction or pancreatitis.

**Author Contributions**

Anas K. Gremida – Acquisition of data, Analysis and interpretation of data, drafting the article, Revising it critically for important intellectual content, Final approval of the version to be published
Matthew Stotts – Analysis and interpretation of data, revising the article for important intellectual content. Final approval of the version to be published.
Bali Gill – Acquisition of data, drafting the article. Final approval of the version to be published.
Haripriya Maddur – Analysis and interpretation of data, Revising the article critically for important intellectual content, final approval of the version to be published

Guarantor
The corresponding author is the guarantor of submission.

Conflict of Interest
Authors declare no conflict of interest.

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