

Intramural duodenal hematoma: an unusual complication after esophagogastroduodenoscopy in an adolescent



Intramural duodenal hematoma (IDH) is a rare complication after small-bowel endoscopic biopsy; it occurs mainly in children with impaired coagulation [1–5]. We report the case of a 13-year-old girl with no relevant medical history who was complaining of abdominal tenderness and failure to thrive and underwent a diagnostic esophagogastroduodenoscopy (EGD) with duodenal biopsies (► Fig. 1). After 24 hours, she presented with nonbloody, nonbilious vomiting, and diffuse and intense abdominal pain. Abdominal ultrasound and a contrast-enhanced computed tomography scan revealed an asymmetric thickening of the duodenal wall measuring 80×50 mm, suggestive of an IDH (► Fig. 2). Laboratory testing showed that she had previously unknown platelet dysfunction. Only at this time did the family reveal details of an episode of hemarthrosis after minor trauma that they had previously omitted to mention.

The patient was treated with total parenteral nutrition, systemic antibiotics, proton pump inhibitors, and nasogastric tube suction. On day 11, a repeat EGD showed a large IDH bulging into the duodenum (► Fig. 3a; ► Video 1). An unsuccessful attempt to pass the obstruction with an 8-mm instrument over a guide-wire (► Fig. 3b) was made. A 5-mm en-

doscope (SN143POK241; Fujifilm) was however successfully passed through the narrowed lumen at the stenosis, which allowed us to check that the ampulla of Vater was not compressed (► Fig. 3c). After this maneuver, the duodenal lumen appeared patent, with an improvement in the degree of obstruction.

On the 15th postoperative day, the nasogastric tube was removed. The day after its removal, the patient tolerated oral feeding, which was then gradually in-

creased. An ultrasound scan on day 25 showed near-complete resolution of the hematoma and the patient was discharged. Full resorption of the IDH was confirmed on follow-up ultrasound 1 month later.

IDH is a very rare complication after endoscopic biopsies, especially in the pediatric population. Its treatment is still debated, but conservative management should be considered the first choice. Furthermore, an accurate anamnesis is fundamental in the diagnostic assess-



► Fig. 1 Duodenal view during the first esophagogastroduodenoscopy prior to biopsies being taken.



► Fig. 2 Computed tomography scan image (coronal view) showing a large intramural duodenal hematoma (*).



► Fig. 3 Endoscopic images showing: a the intramural duodenal hematoma; b a guidewire crossing the duodenal hematoma; c the duodenal lumen beyond the hematoma.



Video 1 Endoscopic and computed tomography views of a huge intramural duodenal hematoma in a 13-year-old girl with undiagnosed platelet dysfunction after diagnostic duodenal biopsies were previously taken during esophagogastroduodenoscopy.

ment in order to prevent serious complications, such as the one described here.

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Competing interests

The authors declare that they have no conflict of interest.

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References

- [1] Werner M, Vieira P, Kuttisch J et al. Intramural duodenal hematoma: an unusual complication of endoscopic small bowel biopsy. *Am J Gastroenterol* 1987; 82: 368–370
- [2] Grasshof C, Wolf A, Neuwirth F et al. Intramural duodenal haematoma after endoscopic biopsy: case report and review of the literature. *Case Rep Gastroenterol* 2012; 6: 5–14
- [3] Osman M, Mantor C, O'Connor J. Duodenal and retroperitoneal hematoma after upper gastrointestinal endoscopy: First presentation of a child with Hemophilia B. *J Pediatric Surg Case Rep* 2014; 2: 421–423

- [4] Diniz-Santos DR, de Andrade Cairo RC, Braga H et al. Duodenal hematoma following endoscopic duodenal biopsy: A case report and review of the literature. *Can J Gastroenterol* 2006; 20: 39–42
- [5] Bechtel K, Moss RL, Leventhal JM et al. Duodenal hematoma after upper endoscopy and biopsy in a 4-year-old girl. *Pediatr Emerg Care* 2006; 22: 653–654

Bibliography

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