Intramural hematoma: a rare complication of endoscopic injection therapy for bleeding peptic ulcers

Intramural hematomas of the gastrointestinal tract are a rare entity. We report two cases of intramural hematoma that developed following endoscopic therapy for bleeding ulcers.

Case 1: A 67-year-old man with diabetes was admitted to the intensive care unit for acute respiratory distress syndrome after a bout of pneumonia. He was being treated with prednisolone, ranitidine, and enoxaparin. Fourteen days later, his hemoglobin decreased from 9.6 g/dL to 6.7 g/dL and he was transfused with 3 units of packed red blood cells (with the hemoglobin rising to 10.2 g/dL). Endoscopy revealed oozing bleeding from an ulcer on the anterior wall of the duodenal bulb. Hemostasis was achieved by injecting 5 mL of diluted epinephrine (1 : 10 000) and 1 mL of absolute alcohol. However, after 3 days, the patient's hemoglobin decreased again (from 9.1 g/dL to 7.8 g/dL). A second-look endoscopy showed a conspicuous, violet-colored bulge in the duodenum, which seemed to be an intramural hematoma (• Video 1).

This was confirmed by computed tomography (• Fig. 1).

Conservative treatment was instituted, but 20 hours later, the patient developed acute abdomen. An emergency laparotomy revealed a large duodenal hematoma extending into the retroperitoneum, with necrosis of the posterior wall (• Fig. 2).

The hematoma was drained and there were no surgical complications. However, the patient died 30 days later from respiratory failure.

Case 2: A 76-year-old man was admitted with angina and melena since 2 days. He had a history of myocardial infarction, which had been treated with clopidogrel and acetylsalicylic acid. His hemoglobin was 11.8 g/dL. Endoscopy revealed an

Fig. 1 Computed tomography scan showing an inhomogeneous, hyperdense mass, 10 × 7.5 cm in size, in the duodenum wall.

Fig. 2 At surgery, a large duodenal hematoma was visualized, with necrosis of the posterior wall and extending into retroperitoneum.

Fig. 3 Second-look endoscopy – 24 hours after hemostasis – showing three violet-colored bulges in the posterior wall of the antrum, corresponding to intramural hematomas.

Fig. 4 Endoscopy, 6 days later, showing a longitudinal ulcer and complete resolution of the hematomas.

Video 1

Endoscopy showing oozing bleeding from an ulcer on the anterior wall of the duodenal bulb; hemostasis was achieved with 5 mL of diluted epinephrine (1 : 10 000) along with 1 mL of absolute alcohol. Three days later, endoscopy showed a prominent violet-colored bulge, corresponding to an intramural hematoma.

oval ulcer on the posterior wall of the gastric antrum, with oozing bleeding. Hemostasis was achieved by injecting 4 mL of diluted epinephrine (1:10000) and 0.5 mL of absolute alcohol. A second-look endoscopy, 24 hours later, revealed three intramural hematomas (● Fig. 3).

Another endoscopy 6 days later showed complete resolution of the hematomas (● Fig. 4).

The cause of most intramural hematomas is blunt abdominal trauma; however, they have also been reported to occur as a complication of anticoagulant therapy [1] and blood dyscrasias [2], and after endoscopic biopsy [3] or therapy [4,5]. In this latter case, the use of large amounts of injected substances and antiplatelet/anticoagulation therapy may favour their development [4]. We believe that in our cases, the presence of comorbidities in the first patient and the excessive anti-aggregation therapy in the second patient were implicated in the development of the intramural hematomas.

Endoscopy_UCTN_Code_CPL_1AH_2AC

Competing interests: None

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DOI 10.1055/s-0029-1214927

Endoscopy 2011; 43: E141–E142

© Georg Thieme Verlag KG Stuttgart · New York · ISSN 0013-726X

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