

Intramural duodenal hematoma after submucosal injection of epinephrine for a bleeding ulcer: case report and review.

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SUMMARY: Intramural duodenal hematoma after submucosal injection of epinephrine for a bleeding ulcer: case report and review.

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We present a case of intramural duodenal hematoma as a complication of endoscopic therapy for a bleeding duodenal ulcer in an adult patient with no evidence of other pathologies. A 18-year-old man was admitted in emergency room with gastrointestinal bleeding manifested

by melena. Previous medical history revealed that he had endoscopic sclerotherapy for bleeding duodenal ulcer 5 months before. Endoscopy revealed a Forrest 2a ulcer in the duodenal bulb and sclerotherapy was performed by injecting 10 ml of 0.2% epinephrine and 20 ml of NaCl 0.9% solution. Upper occlusion's signs appeared 36 hours after the procedure. The hematoma, that was identified by endoscopy and confirmed by MRI and CT scan of the abdomen, caused transient duodenal obstruction. Combined conservative management with nasogastric tube and total parenteral nutrition resulted in reduction of obstructive symptoms within 4 weeks.

KEY WORDS: Duodenal hematoma - Sclerotherapy complication - Bleeding ulcer.

Introduction

Endoscopic techniques to achieve haemostasis for bleeding ulcers and varices of the upper digestive tract have continued to evolve in the last 30 years. Several studies show that early endoscopic haemostatic therapy reduces significantly the rates of recurrent bleeding, the need for emergent surgery and mortality in patients with acute non-variceal upper gastrointestinal bleeding (1, 2, 4). Endoscopy is now the method of choice for controlling active ulcer bleeding (4, 11, 12). Endoscopic sclerotherapy is described as safe and effective in treating bleeding ulcers, but it may be associated with serious complications including perforation, necrosis, ulceration, vessel thrombosis and bleeding, leading to significant morbidity (3, 13).

Intramural hematoma is a rare complication of diagnostic or therapeutic endoscopic procedure of the upper digestive tract that has been described in different medical reports in the literature (2, 5, 6). We report a case of intramural hematoma of the duodenum after en-

doscopic injections of epinephrine in a young patient without associated evident pathologies.

Case report

A 18-year-old man was admitted to our hospital with gastrointestinal bleeding manifested by melena. Five months before he had undergone endoscopic sclerotherapy for a bleeding duodenal ulcer. No evidence of previous other pathologies was found. On admission the physical examination revealed a pulse rate of 108 per minute, blood pressure 105/72 mmHg and temperature 36.8 C. Laboratory tests reported hemoglobin 10,1 g/dl, white blood cell count 6100/mm³, platelets count 280000/mm³, prothrombin rate 70% and INR 1,21. Endoscopy revealed a ulcer in the medial wall of the duodenal bulb classified as Forrest 2a (visible vessel but no active bleeding during endoscopy), and sclerotherapy was performed by injecting 10 ml of 0.2% epinephrine and 20 ml of NaCl 0.9% solution. The second day after the procedure (36 hours after endoscopy), the patient developed epigastric pain associated with nausea and vomit after a liquid diet. An abdominal echography showed thickening of the duodenal wall. The hematoma that was identified by endoscopy and confirmed by MRI and CT scan of the abdomen (Figure 1), caused an almost complete duodenal obstruction.

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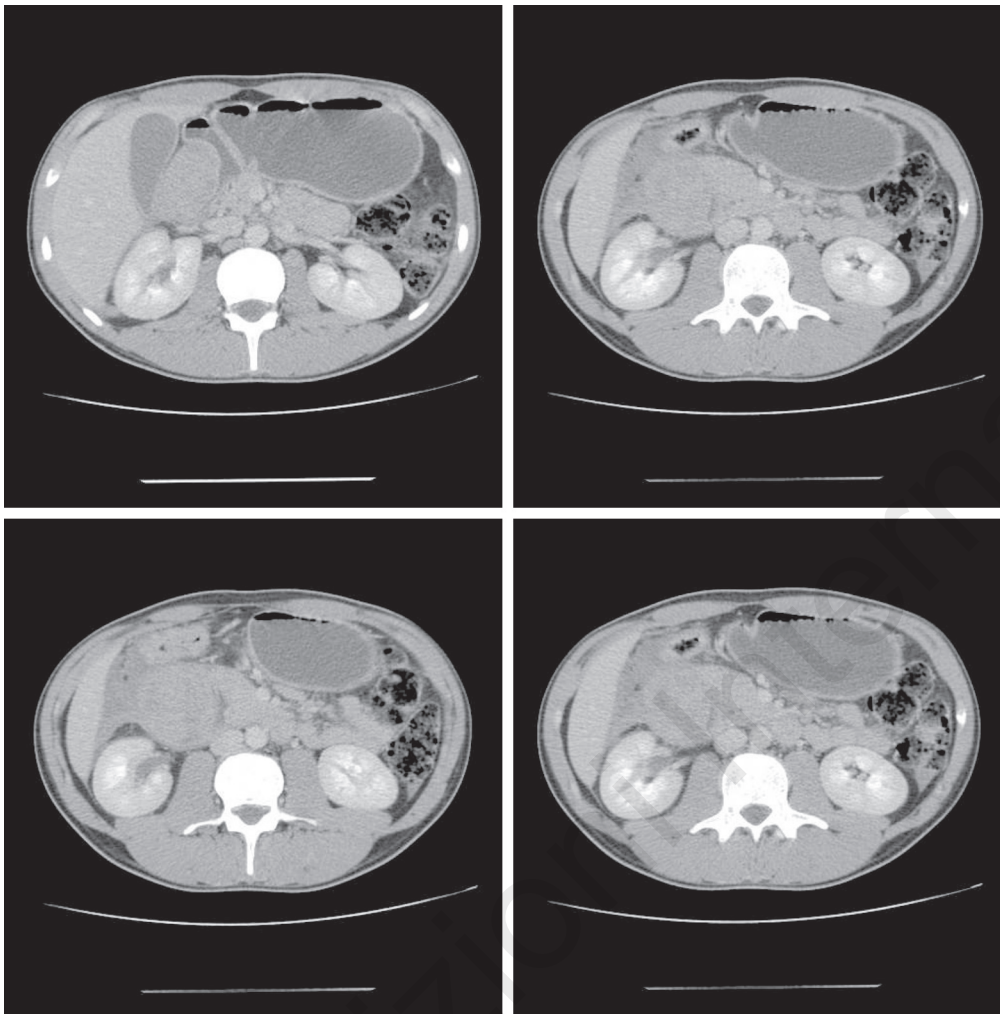


Fig. 1 - Abdominal CT scan reveals hematoma of the duodenum wall.

No changes in the hemoglobin levels or biochemical blood values were detected. Conservative management with nasogastric tube and total parenteral nutrition resulted in reduction of obstructive symptoms within 4 weeks. The parenteral nutrition was delivered according to the recent guidelines on the nutrition support (14). The reduction of the size of hematoma was followed by ultrasonography and an endoscopic exam performed 32 days after the admission showed that the duodenal stenosis had almost completely disappeared.

Discussion

Intramural hematoma of the duodenum is mostly a complication of abdominal trauma and more than 50% of them are described in patients under 15 years old (5, 7). The anatomical position of the second part of the duodenum in front of the vertebral column, fixed by the peritoneum and the high submucosal vascular supply in-

creases the probability of injury of the organ causing intramural hematomas (1). Non-traumatic cases are reported due to blood modifications, pancreatic disease, ruptured aneurisma of intestinal vessels and as a complication of digestive endoscopic procedures (1, 8).

According to our knowledge, less than 20 cases of intramural hematoma of the duodenum after biopsy or sclerotherapy are reported (2, 6, 8). More than half of them were verified after biopsy (9). Most of the patients having intramural hematoma of the duodenum after endoscopic haemostatic procedures had coagulation disorders, thrombocytopenia, liver cirrhosis or a combination of these (6). In all the cases we found epinephrine injections were performed, combined in some of them with ethanolamine injections or vessel clipping. In some cases, an acute pancreatitis associated to duodenal intramural hematoma was described, probably due to the compression of the papilla of Vater (10). In our patient neither haematological or liver dysfunctions nor signs of pancreatitis were detected.

Until 1970, the intramural hematoma of the duodenum was object of surgical treatment (7). However, recent experiences show that conservative treatment combining nasogastric tube position with total parenteral nutrition had excellent results in resolution of the problem in 3 to 6 weeks (6).

Our case is an intramural hematoma of the duodenum following endoscopic epinephrine injection for a bleeding duodenal ulcer. A conservative strategy of careful monitoring of the lesion, parenteral nutrition and nasogastric tube resulted in resolution of symptoms in

4 weeks (10, 13, 14). No associated disease that would be associated with bleeding was evident.

Conclusion

In summary, intramural duodenal hematomas as a complication of endoscopic procedures, may occur even in patients without associated disease and a non-surgical strategy can lead to good results avoiding surgical trauma.

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