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Intraluminal Hematoma: A Rare Case of Grelic Intestinal Obstruction: Case Report

Benslimane Saad[1*], El Fdili El Mostapha[1], Ahmed Zerhouni[1], Tarik Souiki[1], Khalid Mazaz[1], Imane Toughrai[1], Karim Ibn Majdoub[1]

[1]Visceral Surgery Service, Hassan II University Hospital, Faculty of Medicine and Pharmacy of Fez, Sidi Mohammed Ben Abdellah University, Fez, Morocco

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***Corresponding author:** Benslimane Saad
Visceral Surgery Service, Hassan II University Hospital, Faculty of Medicine and Pharmacy of Fez, Sidi Mohammed Ben Abdellah University, Fez, Morocco

Abstract | **Case Report**

Anticoagulant drugs are widely used for various purposes as a prophylactic agent or for treatment and its most common side effect is bleeding. Intramural hematoma of the small intestine due to use of high-dose anticoagulation is the most common form. Computed tomography (CT) is the most commonly used imaging method in diagnosis. Conditions requiring surgery are serious intraluminal bleeding, bowel perforation or the presence of ischemia.

Keywords: Anticoagulant drugs, Intramural hematoma, Computed tomography (CT), fecaloid vomiting, diagnosis.

INTRODUCTION

Bleeding, presenting as an intramural hematoma of the small intestine, is a rare complication, seen in 1 of 2,500 patients using anticoagulant drugs [1]. Computed tomography (CT) characteristics include circumferential wall thickening, intramural hyperdensity, luminal narrowing, and intestinal obstruction [2].

In this paper, we present a case of warfarin overdose that resulted in spontaneous intramural ileal hematoma with characteristic CT findings, and we report the follow-up after treatment.

CASE REPORT

We describe the case of a 71-year-old patient with history of mitral valve replacement under anticoagulant.

Three days before his admission he developed diffuse abdominal pain, nausea and fecaloid vomiting.

On Admission, the patient presented 38-degree fever, accelerated heart beat at 110 beats per minute and polypnea, an abdominal physical examination revealed abdominal distension but no signs of peritoneal irritation. Similarly, a rectal examination showed no signs of bleeding.

The biological assessment showed anemia with a hemoglobin level of 6 g/dL, a white blood cell count of 17200/mm3 a C-reactive protein of 180 mg/L, with an international normalized ratio (INR) of 8.

Computed tomography picked up a large blood clot causing luminal narrowing, and small bowel obstruction.

Figure 1: CT scan showing a large hematoma in the distal ileum responsible for grelic occlusion

At laparotomy a grossly dilated jejunum and ileum was found, with no perforation. Evacuation of the

ileal hematoma was performed through a small enterotomy.

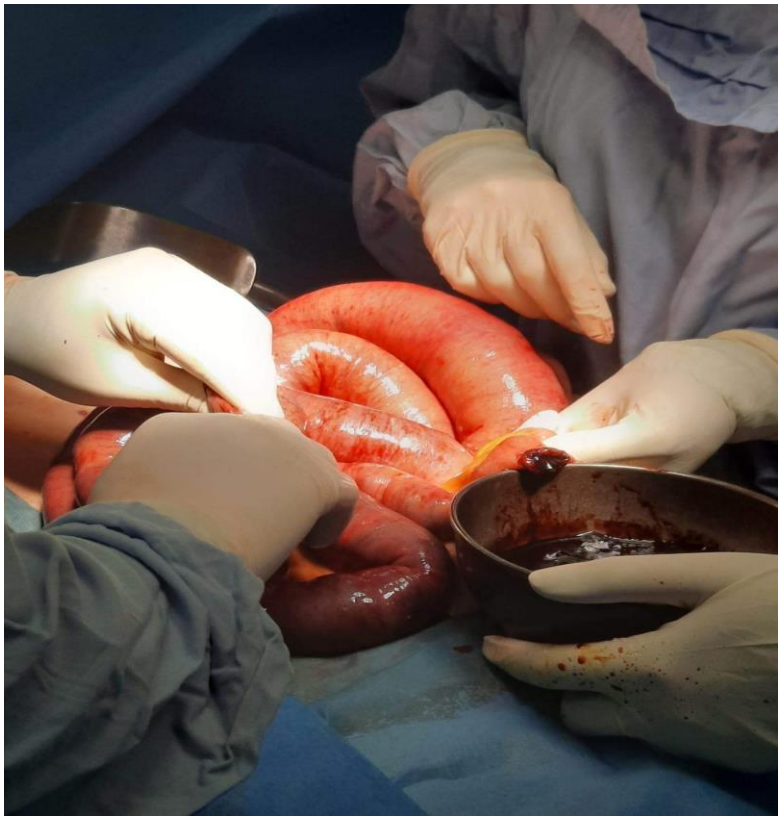

Figure 2: Extraction of the hematoma trough a small enterotomy

DISCUSSION

Intramural small bowel hematoma is a rare disease with an incidence of one case per 2500 patients [3, 4]. The most common area involved in localization is the jejunum, followed by the ileum and the duodenum [5].

Among non-traumatic etiologies, anticoagulation therapy is considered the main etiology of intramural hematoma of the digestive tract [6]. It is seen more common in men, and the average age is 64 [7].

Shredding of terminal arteries appears to be the most plausible physiopathological explanation. After the vascular rupture, blood leaves the mesentery and infiltrates the intestinal wall muscle. Thus, the hematoma dissects its way between the intestinal mucosa and the muscle layer. Therefore, the viability of the mucosa is preserved, unlike in mesenteric vascular occlusion [8].

Usually, the first symptom is abdominal pain often accompanied by nausea and vomiting [9]. Patients can also present with gastrointestinal bleeding due to rupture of the hematoma. In the presence of signs of peritoneal irritation, hematoma complications like necrosis, perforation and hemoperitoneum should be suspected.

In a patient presenting with abdominal pain, presence of a history of use of anticoagulants and prolonged INR should raise suspicion and should be investigated.

An abdominal ultrasound can show a thickened intestinal wall, mainly involving the submucosal layer.

CT scan is the most useful test for diagnosis. Typical findings in abdominal CT are diagnostic, and they include circumferential wall thickening, narrowing of the lumen, hyper-density and obstruction [10].

During treatment, anticoagulant drugs are discontinued first, bleeding parameters are tried to be normalized with vitamin K and fresh frozen plasma support, oral intake is stopped, and decompression is applied by nasogastric tube.

In patients without signs of peritoneal irritation or complications, the clinical presentation resolves in 5-7 days with conservative treatment. Full hematoma resolution can be radiologically determined in a few weeks. If imaging findings persist longer than two months, other underlying clinical situations should be considered [11].

The anticoagulant therapy may be resumed after regression of the hematoma and the patient's

clinical improvement. Surgical treatment is not indicated in patients with uncomplicated intramural hematoma.

The possibility of developing complications (ischemia, necrosis, perforation) should be considered in patients with signs of peritonitis or deterioration in vital signs during follow-up and an emergency operation decision should not be delayed.

CONCLUSION

Spontaneous intestinal intramural hematoma is a disease that presents as a rare complication of anticoagulant therapy, and leads to acute abdominal pathologies such as small bowel obstruction and perforation.

The primary treatment modality in patients without signs of peritonitis, with partial mechanical bowel obstruction should be fluid replacement and non-operative management with close follow-up.

Surgical exploration should be administered to patients with; intra-abdominal hemorrhage, ischemia, perforation, peritonitis, and obstruction that does not resolve with conservative treatment [12].

REFERENCES

1. Uzun, M. A., Koksal, N., Gunerhan, Y., Sahin, U. Y., Onur, E., & Ozkan, O. F. (2007). Intestinal obstruction due to spontaneous intramural hematoma of the small intestine during warfarin use: a report of two cases. *European Journal of Emergency Medicine*, *14*(5), 272-273.
2. Abbas, M. A., Collins, J. M., & Olden, K. W. (2002). Spontaneous intramural small-bowel hematoma: imaging findings and outcome. *American Journal of Roentgenology*, *179*(6), 1389-1394.
3. Bettler, S., Montani, S., & Bachmann, F. (1983). Incidence of intramural digestive system hematoma in anticoagulation. Epidemiologic study and clinical aspects of 59 cases observed in Switzerland (1970-1975). *Schweizerische medizinische Wochenschrift*, *113*(17), 630-636.
4. Abdel Samie, A., & Theilmann, L. (2012). Detection and management of spontaneous intramural small bowel hematoma secondary to anticoagulant therapy. *Expert review of gastroenterology & hepatology*, *6*(5), 553-559.
5. Kang, E. A., Han, S. J., Chun, J., Lee, H. J., Chung, H., Im, J. P., ... & Jung, H. C. (2019). Clinical features and outcomes in spontaneous intramural small bowel hematoma: cohort study and literature review. *Intestinal research*, *17*(1), 135-143. 10.5217/ir.2018.00085
6. Kones, O., Dural, A. C., Gonenc, M., Karabulut, M., Akarsu, C., Gok, I., ... & Alıs, H. (2013). Intramural hematomas of the gastrointestinal system: a 5-year single center experience. *Journal of the Korean Surgical Society*, *85*(2), 58-62. 10.4174/jkss.2013.85.2.58
7. Sorbello, M. P., Utiyama, E. M., Parreira, J. G., Birolini, D., & Rasslan, S. (2007). Spontaneous intramural small bowel hematoma induced by anticoagulant therapy: review and case report. *Clinics*, *62*, 785-790.
8. Çarkman, S., Ozben, V., Saribeyoglu, K., Somuncu, E., Erguney, S., Korman, U., & Pekmezci, S. (2010). Spontaneous intramural hematoma of the small intestine. *Ulus Travma Acil Cerrahi Derg*, *16*(2), 165-169.
9. Birla, R. P., Mahawar, K. K., Saw, E. Y., Tabaqchali, M. A., & Woolfall, P. (2008). Spontaneous intramural jejunal haematoma: a case report. *Cases Journal*, *1*, 1-3.
10. Abbas, M. A., Collins, J. M., & Olden, K. W. (2002). Spontaneous intramural small-bowel hematoma: imaging findings and outcome. *American Journal of Roentgenology*, *179*(6), 1389-1394.
11. Altinkaya, N., Parlakgümüş, A., Demir, S., Alkan, O., & Yildirim, T. (2011). Small bowel obstruction caused by intramural hematoma secondary to warfarin therapy: a report of two cases. *Turkish Journal of Gastroenterology*, *22*(2), 199-202.
12. Sorbello, M. P., Utiyama, E. M., Parreira, J. G., Birolini, D., & Rasslan, S. (2007). Spontaneous intramural small bowel hematoma induced by anticoagulant therapy: review and case report. *Clinics*, *62*, 785-790.