

Acute Intestinal Obstruction on a Spontaneous Intra-Parietal Hematoma: Rare Complication Induced by Anti-coagulant Therapy

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Authors' contributions

This work was carried out in collaboration among all authors. Authors IH and AHB designed the study, performed the statistical analysis, wrote the protocol and wrote the first draft of the manuscript. Authors IH and AHB managed the analyses of the study. Author IH managed the literature searches. All authors read and approved the final manuscript.

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Case Report

ABSTRACT

The acute bowel occlusion for the small intestine parietal hematoma due to anticoagulant treatment or vitamin K antagonists (VKA) is a rare pathology. Few cases have been reported in literature. The often clinical presentation is an acute abdomen. The evolution under medical treatment (conservative treatment) is favorable. In few cases, there is a persistence of occlusion and the surgical treatment is indicated. We report a case of a 67 year old male patient, known to have valvulopathy under VKA, who presented an intestinal occlusion due to parietal hematoma discovered on abdominal CT and who benefited medical treatment with a favorable evolution.

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1. INTRODUCTION

The acute intestinal occlusion is the one of current diagnosis to the patients who present abdominal pain and represent 12.6 to 21.8% of emergencies [1]. The clinical presentation varies from minor symptoms such as abdominal pain, nausea, vomiting but in some cases in delayed onset of the diagnosis there is an acute abdomen and even with peritonitis [2]. The CT scan is the preferred exam and show with precision the site of occlusion and the etiology [2]. The most aetiologies are hernia and tumors pathologies in 65 to 80% [3]. The bowel obstruction by intra parietal hematoma is the one of rare etiologies especially in old people due whether iatrogenic or anticoagulant treatment [4].

We report a case of a 67 year old male patient, known to have valvulopathy under VKA, who presented an intestinal occlusion due to parietal hematoma.

2. CASE PRESENTATION

It is a 67 year old male, with aortic valvulopathy treated with prosthesis under Sintrom®, over 6 years, admitted for occlusive syndrome over 5 days associated with vomiting, fever and overall health deterioration. The physical exam finds a patient with 15/15 of GCS, blood pressure of 120/70 mmHg, pulse of 85 Pbm, respiratory rate of 18 cpm, well colored mucosa, abdominal distension sensibility, no palpable mass, the proctology examination was rectal normal. The abdomen opacification showed digestive gaz and the abdominal CT scan revealed an abdominal distension of intestines lumps to 34 cm with gaz and facies sign proximal to the hyper dense wall thickening of ileo caecal junction measured to 20 mm (parietal hematoma) (Fig. 1). The trans thoracic ultrasound showed valvula prosthesis without other abnormality.

The hemostasis tests results was of prothrombin rate of 15%, International Normalized Ratio (INR) of 4,50 due to an overdose of anticoagulant treatment. The patient was put under clinico-biologic monitoring and the sintrom was immediatly stopped with fresh frozen plasma infusion and heparinotherapy with LMWH to the dosage of 0,6 ml x 2 /day and nasogastric tube with gentle suction. the patient has a spontanous recovery and the intestine retaks function at D2 with flexible abdomen and disappearance of gaz

level on abdomen opacification at D3. The patient was discharged from hospital at 5 day with a normal abdominal CT control which showed an hematoma resolution (Fig. 2). The Sintrom® for treatment was reinstaured after overlap with LMWH and monitoring by INR. The follow up is 1 years without complication.

3. DISCUSSION

Spontaneous intra-parietal hematoma of the gastrointestinal tract is a rare pathology, it most often occurs on proximal loops [5], with several risk predisposing factors, such as coagulopathies, hematological malignancies, vascularitis; pancreatitis; chemotherapy; endoscopic biopsies and anticoagulants [6]. Intra-parietal hematoma of the digestive tract is a rare complication of anticoagulant therapy. Although vitamin K antagonists are widely used to prevent the thrombosis formation due to prothesis valves, atrial fibrillation, pulmonary embolism and deep vein thrombosis [7]. The incidence of this complication in patients under this treatment is estimated at 1/2500 [5]. It can occur in any segment of the intestinal wall in the gastrointestinal tract [7]. The small intestine is the common site affected by a spontaneous intra-parietal hematoma, while intramural hematomas of the colon, rectum and duodenum are rare [7,8]. Men are the most affected in 60% of cases, with an average age of 57.6 years [6], the symptoms are remarkably different. 97.5% of cases admitted to the emergency room for an acute abdominal pain, associated in 45% of cases with vomiting and gas [6]. The combination of anti thrombotics increases their potential to cause bleeding [5].

The elevated INR and leukocytosis are common; however, the presence of anemia is variable, with an incidence ranging from 7.6 to 84.6% in the case series [6]. The first six months of AVK therapy and recent hospitalization were important temporary risk factors [9]. Thrombocytopenia is relatively weak in cases of intra-parietal hematoma localized at the jejuno-ileal level than at the duodenal level, in addition, patients with intra-parietal hematoma with duodenal localization presented more severe comorbidities [10].

The abdominal radiography is nonspecific, it showed hydro-aeric levels with intestinal dilation without predicting the origin of the obstruction or

the visualization of the intra parietal hematoma [11]. The characteristic images of CT are the double or multilayer thickening of the intestinal wall with a thick and hyperechoic inner layer and a thin and hypoechoic outer layer, the reduction of peristalsis with fixed images with narrowed light and wavy mucosa [4,6,12]. An upper gastrointestinal contrast study should not be necessary, but if done, it may show thickening of the folds with luminal narrowing of a rigid, non-distensible segment of the intestine [12]. The presence of pneumoperitoneum on imaging means intestinal necrosis and perforation and the presence of a closed-loop obstruction on imaging with focal peritonitis is an indication for emergency surgical exploration [3]. The specific preventive treatment for this spontaneous wall hematoma does not exist. If an anticoagulant or VKA is essential and obliged for treatment, the patient should be closely monitored [11]. Anti-coagulant therapy is an important risk factor in the occurrence of a complication related to overdose, mainly bleeding or intestinal parietal hematoma which may indicate surgery or in most cases conservative treatment [10].

The most commonly used first-line treatment for small bowel obstructions on AVK is conservative medical, and about 75% of cases treated will not require surgery [3]. In patients without immediate concern for intestinal ischemia, digestive rest and the installation of nasogastric tube with correction of electrolyte abnormalities are required for a few days [11]. It can take weeks or even months for a hematoma to fully resolve, however, it is generally safe to restart anticoagulant therapy after the acute episode as long as it remains within therapeutic limits [6]. If the course of occlusion under conservative treatment is not favorable. Surgery is indicated. If there are obvious signs of peritonitis or active hemorrhage, emergency surgery should be taken [10].

Despite its low incidence, intra parietal hematoma should be considered as a differential diagnosis in patients on anticoagulant therapy who present with gastrointestinal symptoms, even in the absence of abdominal pain, with the importance of early diagnosis and the role of nonoperative management of an intra parietal hematoma of the small intestine [6].

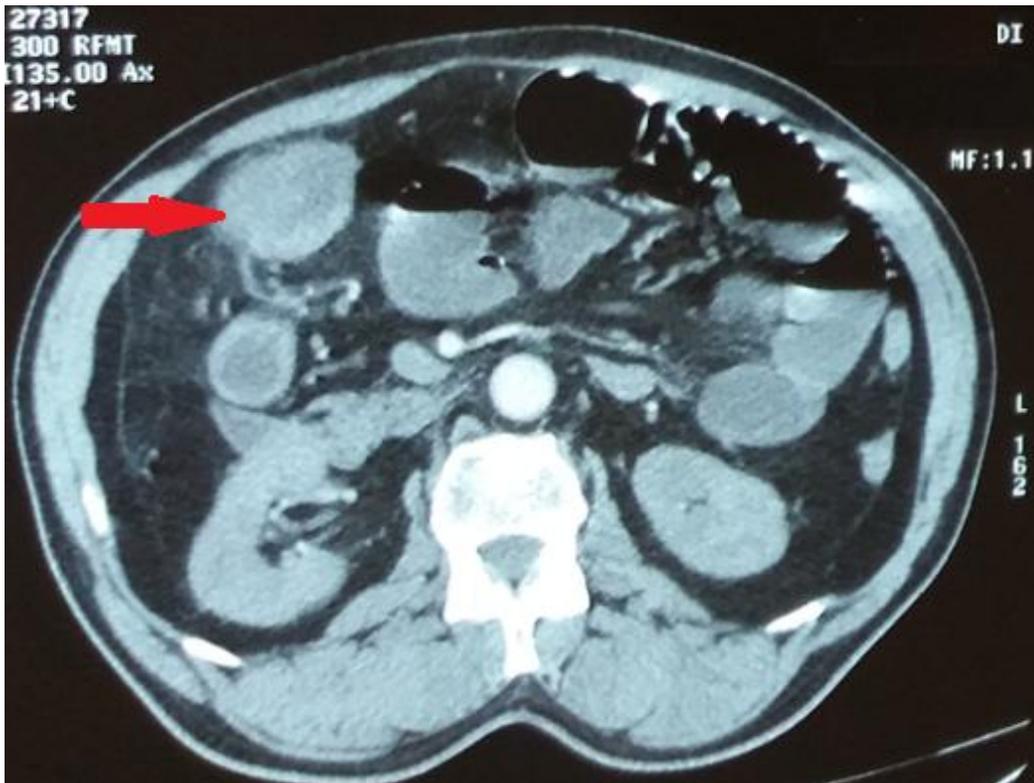


Fig. 1. Abdominal CT scan: Abdominal distension of intestines loops to 34 cm with gaz and facies sign proximal to the hyper dense wall thickening of ileo caecal junction mesured to 20 mm (parietal hematoma) (Red Arrow)

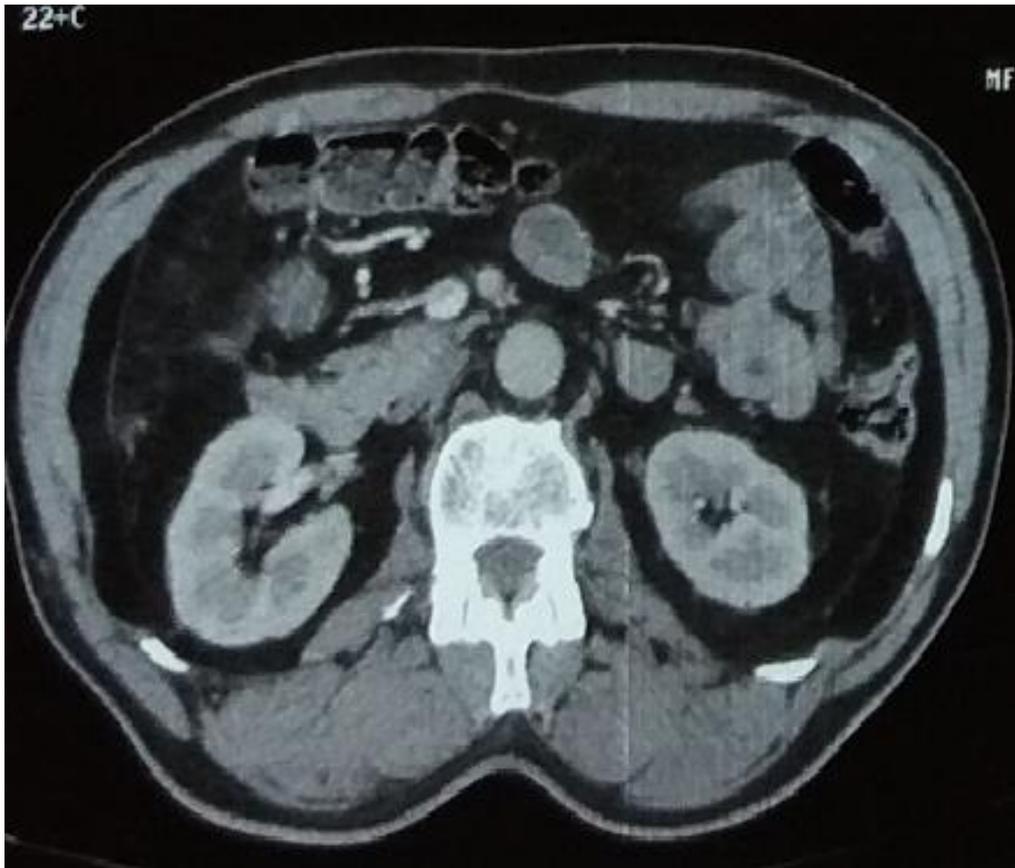


Fig. 2. Abdominal CT control normal (Hematoma resolution)

4. CONCLUSION

Acute intestinal obstruction on a spontaneous intramural small bowel hematoma is a rare pathology, the most common form of occurrence of VKA accident, imaging and particularly abdominal CT poses the diagnosis of certainty, The first-line treatment of this complication is conservative medical. Surgery is indicated in very specific situations.

CONSENT

As per international standard or university standard, patient's written consent has been collected and preserved by the author(s).

ETHICAL APPROVAL

As per international standard or university standard, written approval of Ethics committee has been collected and preserved by the author(s).

COMPETING INTERESTS

Authors have declared that no competing interests exist.

REFERENCES

1. Choi, Hyemin B, Koeckert M, and Tomita S. Intramural bowel hematoma presenting as small bowel obstruction in a patient on low-molecular-weight heparin. *Case Reports in Pediatrics*. 2018; 1-3.
2. Boniface KS, King JB, LeSaux MA, Haciski SC, Shokoohi H. Diagnostic accuracy and time-saving effects of point-of-care ultrasonography in patients with small bowel obstruction: A prospective study. *Ann Emerg Med*. 1 févr. 2020;75(2): 246-256.
3. Posluszny Joseph A, Fred A. Luchette. *Intestinal obstruction: Small and large bowel*. Evidence-Based Critical Care. Springer, Cham, 2017;681-686.

4. Florian R, Jackson C. Spontaneous Intramural Intestinal Hematoma: An Increasing Phenomenon?: 1994. Am J Gastroenterol. 2019;114(2019 ACG Annual Meeting Abstracts):S1115.
5. Fox KA, Velentgas P, Camm AJ, Bassand JP, Fitzmaurice DA, Gersh BJ, Pieper KS. Outcomes associated with oral anticoagulants plus antiplatelets in patients with newly diagnosed atrial fibrillation. JAMA Network Open. 2020;3(2):e200107-e200107.
6. Limmer AM, Clement Z. Extensive small bowel intramural haematoma secondary to warfarin. Journal of surgical case Reports. 2017;3:044.
7. Forutan MA, Mojarad FA, Rahmani N. Case report: Large ileal intramural hematoma presenting as an intestinal obstruction in a patient on Warfarin with incidental breast cancer. F1000Research. 2018;7(724):724.
8. Niehues SM, Denecke T, Bassir C, Hamm B, Haas M. Intramural duodenal hematoma: Clinical course and imaging findings. Acta Radiologica Open. 2019;8(4):205.
9. Jaakkola S, Nuotio I, Kiviniemi TO, Virtanen R, Issakoff M, Airaksinen KJ. Incidence and predictors of excessive warfarin anticoagulation in patients with atrial fibrillation. The EWA study. PloS One. 2017;12(4):e0175975.
10. Kang EA, Han SJ, Chun J, Lee HJ, Chung H, Im JP, et al. Clinical features and outcomes in spontaneous intramural small bowel hematoma: cohort study and literature review. Intest Res. Janv. 2019;17(1):135-43.
11. Sorbello MP, Utiyama EM, Parreira JG, Birolini D, Rasslan S. Spontaneous intramural small bowel hematoma induced by anticoagulant therapy: Review and case report. Clinics. 2007;62(6):785-90.
12. Pimenta JM, Saramet R, de Castro JP, Pereira LG. Overlooked complication of anticoagulant therapy: The intramural small bowel hematoma — A case report. International Journal of Surgery Case Reports. 2017;39:305-308.

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