

Spontaneous Hematoma of the Duodenum: Case Report and Review of the Literature

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1. Abstract

Spontaneous duodenal hematoma is a rare and challenging condition, because of its nonspecific clinical and radiological presentation. It has several causes, but hematological diseases have an important role in these cases. Controversy still surrounds its therapeutic management because of the lack of clinical evidence in the literature on this subject, but conservative treatment seems to present the best results. In the following paper, we present a clinical case that was attended at our service and a brief review of the literature on this subject.

3. Introduction

Duodenal hematoma is a rare condition that may occur spontaneously or secondarily to bruising trauma. The latter is the commonest cause[1]. In cases of trauma, it can be explained by the traction that is exerted on the fixed vascular anatomy of the duodenum in situations of massive deceleration. In cases with spontaneous causes, there is generally an associated underlying pathological condition. Examples of such conditions include: coagulopathy, pancreatitis, vasculitis and vascular malformation, among others. There may also be iatrogenic causes such as duodenal biopsy via endoscopy and formation of arterial pseudoaneurysm following hepatobiliary surgery [2,3]. Furthermore, there may be cases in which the cause is indeterminate. The study presented here was based on this last group. Within surgical experience, little is known about duodenal hematoma. Its rareness makes it difficult to conduct scientific studies with greater levels of evidence on this topic that might outline well-grounded management methods. With the aim of exploring and discussing this uncommon disease, we describe a case that we experienced in our department.

4. Clinical Report

The patient M.J.M, was a 73-year-old retired white man of Portuguese nationality. He presented a condition of epigastric pain, of moderate intensity and without irradiation, along with incoercible vomiting after meals. He said that had not had any weight loss, fever, goose bumps, lower digestive tract abnormalities or history of trauma. He said that he was not making any regular use of coumarin drugs, antiplatelet aggregant agents or any medication that might interfere with coagulation. He also said that he did not have any history of coagulopathy or abnormal bleeding. He was seeking medical care, and he was administered prophylaxis against acute myocardial infarction (chest pain) consisting of 200 mg of acetylsalicylic acid. After laboratory tests had been performed, he was treated as a probable case of infection of the gastrointestinal tract. Despite this initial treatment, no clinical improvement was achieved. Fourteen days later, he presented ecchymosis in the area of a former operative wound (right-side inguinal hernioplasty performed seven years earlier), spontaneously. The physical examination showed a palpable mass in the hypochondrion and right flank.

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Abdominal computed tomography with double contrast (**Figure 1**) and nuclear magnetic resonance (**Figure 2**) were then performed. These showed images of an extrinsic mass that was compressing the second and third portions of the duodenum, thereby suggesting the presence of a hematoma in the posterior wall. The patient was then referred to our department, for treatment follow-up. A coagulogram on admission showed TAP of 72%, PTT of 23.1 seconds and INR of 0.92.

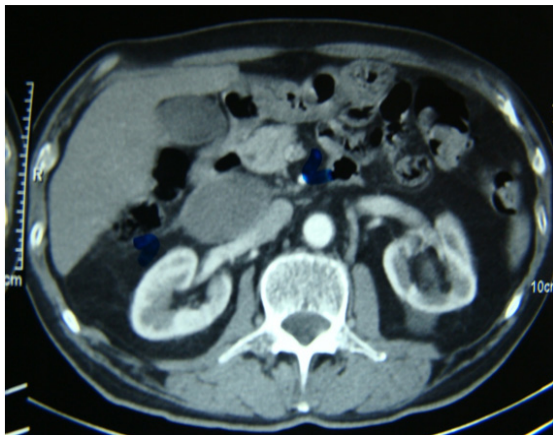
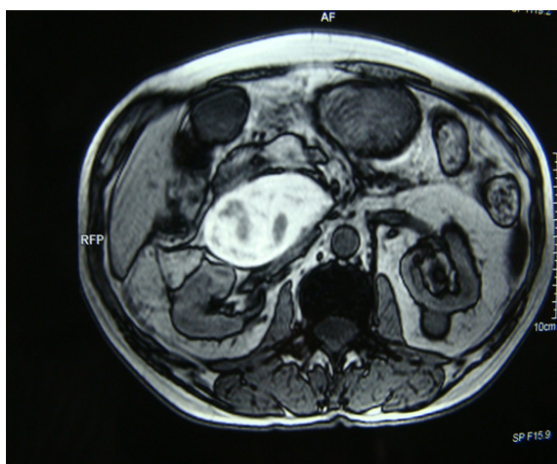


Figure 1: Tomo graphic image with density equal to blood, in the second to third portion of the duodenum, suggesting a hematoma in the duodenal wall.



Figures 2: Magnetic resonance imaging with high contract uptake in the posterior region of the second to third portion of the duodenum, presenting compression of the lumen of the organ and suggesting a hematoma in the duodenal wall.

The contrast-enhanced examination on the stomach and duodenum revealed compression of the third portion of the duodenum (**Figure 3**). During the hospitalization, conservative treatment was chosen, with regular administration of bromopride and a liquid diet without residues for four days, and gradual evolution thereafter. The patient presented good clinical evolution and was discharged from hospital on the tenth day. He was then referred to the specialized hematology service.

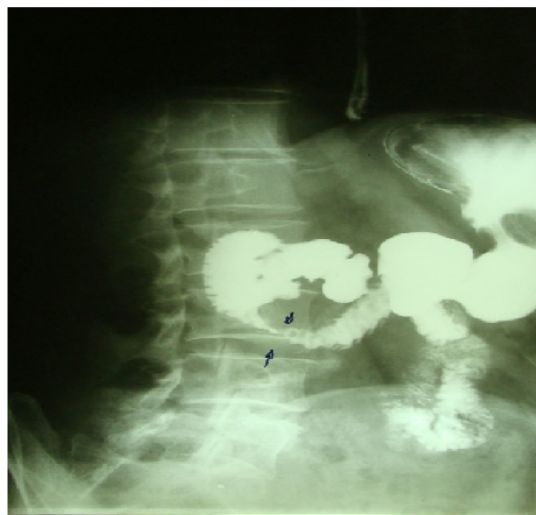


Figure 3: Contrast-enhanced radiological image of the stomach and duodenum showing diminished lumen in the second and third portions of the duodenum, suggesting compression due to a hematoma in the duodenal wall.

Duodenal hematoma was first described by McLachlan in 1838 [4]. Since then, this condition has been increasingly reported in the literature. The clinical condition is not always specific, and the diagnosis is usually made by means of image examination. An image of the duodenum showing a “coil-spring” pattern on simple radiography is suggestive but very uncommon. High-resolution computed tomography of the abdomen has been shown to be the examination with best accuracy for evaluating duodenal hematomas [5]. This examination indicates increased thickness of the duodenal wall, with density in Hounsfield units characteristic of blood. Among the differential diagnoses, the most common ones are fibrosis resulting from duodenal ulcers or chronic pancreatitis, duodenal adenocarcinoma, GastroIntestinal Stromal Tumor (GIST), pancreatic pseudocyst and cystic pancreatic tumor [6]. Even though bruising trauma of the abdomen is the most common cause, many of these cases of duodenal hematoma are classified as idiopathic, as in our patient. We believe that many of these cases that are classified as idiopathic are in reality cases of coagulopathy, and particularly, disorders relating to platelet aggregation [7] that are not diagnosed during routine examinations requested in cases of gastrointestinal obstruction, such as Glanzmann’s disease [8]. In such cases, examinations that are more specific for analyzing platelet function may be of great value for obtaining a diagnostic of greater precision. The management method that was initially preferred, i.e. surgical treatment, is today reserved for the few cases that are refractory to clinical treatment or in which concomitant lesions caused by the closed abdominal trauma are suspected. Surgical treatment to evacuate the coagulum can be undertaken through an incision in the seromuscular layer or a bypass of the affected area, if the previous procedure is ineffective [6]. Some authors have reported improvements in symptoms through treatments that are less invasive than surgery, such as

percutaneous aspiration and endoscopic dilatation, although there is no evidence that these treatments present better results than from conservative treatment [9]. The conservative treatment consists basically of venous hydration, gastric decompression, use of prokinetics, correction of coagulopathy when present and parenteral or enteral nutrition, when necessary. Most of the studies in the literature have shown favorable evolution through conservative treatment, as also seen in our patient. In a retrospective study on 181 children with traumatic duodenal hematoma, it was observed that the length of hospital stay was shorter and the complication rate was lower with conservative treatment, compared with surgical treatment [10]. Nonetheless, the scarcity of scientific evidence in the literature for making such comparisons needs to be taken into account. As pointed out earlier, the rarity of this pathological condition explains the small number of studies on this subject.

6. Conclusion

Through this case report, we have presented an unusual form of spontaneous duodenal hematoma that showed good evolution with conservative treatment.

7. Conflict of Interest: None

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