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Case Report

Uncommon Bilateral Rectus Sheath Hematoma: A Case of Non-Traumatic Abdominal Pain

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Abstract

Rectus sheath hematoma is a condition that occurs when blood accumulates in the rectus sheath, the connective tissue surrounding the rectus abdominis muscles. It is most commonly seen after trauma, such as blunt abdominal injury or strenuous physical activity. However, non-traumatic cases can also occur, particularly in individuals with underlying risk factors such as anticoagulant therapy, coagulopathies, or advanced age. Bilateral Rectus sheath hematoma, where bleeding occurs in both sides of the abdominal wall, is even more uncommon. This case report discusses a rare presentation of non-traumatic bilateral rectus sheath hematoma in a patient who presented with acute abdominal pain and highlights the importance of considering this diagnosis in the differential diagnosis of acute abdominal pain, even in the absence of a history of trauma.

Keywords: *Rectus Sheath Hematoma; Abdominal Pain; Abdominal Imaging; Coagulopathy; Case Report*

Introduction

Rectus sheath hematoma (RSH) is an uncommon condition, representing only 1% - 2% of all cases of abdominal pain [1]. Typically unilateral, it can also present bilaterally in rare instances. Factors such as coughing, physical exertion, and the use of anticoagulants have been identified as potential triggers for non-traumatic RSH [2].

This case report discusses a rare presentation of non-traumatic bilateral rectus sheath hematoma (RSH) in a patient who presented with acute abdominal pain. The condition was diagnosed through clinical examination, ultrasound imaging, and computed tomography (CT).

The case highlights the importance of considering RSH in the differential diagnosis of acute abdominal pain, even in the absence of a history of trauma.

Case Report

A 68-year-old man, treated for atrial fibrillation, for which he was on Acenocoumarol (SINTROM 1/2 tablet daily), Presented to the emergency department with abdominal pain under the umbilicus that had been progressing for 10 days, with no associated digestive signs or external digestive haemorrhage and no fever. General examination revealed a conscious patient with a blood pressure of 130/70 mmHg, a pulse of 88 beats per minute and a temperature of 36.7°C.

Abdominal examination revealed sub umbilical abdominal tenderness, with palpation of a hard, painful parietal mass that could not be mobilised, with a small bruise around it.

The biological work-up showed a disturbed haemostasis profile, a slightly elevated prothrombin time (PT) and international normalized ratio (INR).

Ultrasound showed hypoechoic areas in both rectus sheaths, suggestive of a hematoma (Figure 1). Abdominal CT scan showed a huge bilateral rectus sheath hematoma measuring 14x7.5x6.6 cm on the right and 13x6.5x5.8 cm on the left (Figure 2).

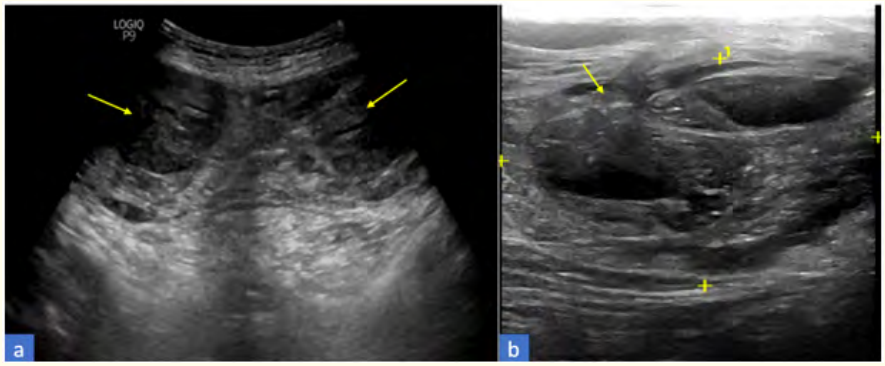

Figure 1: *Abdominal ultrasound performed with a superficial probe in axial (a) and sagittal (b) sections, showing two heterogeneous formations in the rectus abdominis muscles (arrow).*

Figure 2: *Abdominal CT scan in sagittal (a) and axial (b) sections showing a bilateral rectus sheath hematoma (arrow).*

Suspension of anticoagulant therapy and conservative treatment of the haematoma resulted in progressive regression of the haematoma with good clinical outcome.

Discussion

Rectus sheath hematoma is a rare and often misdiagnosed clinical condition. It usually occurs after injury to the branches of the superior epigastric artery in the rectus sheath or following a direct muscle tear [2].

Although this type of haematoma is responsible for less than 2% of abdominal pain, it is essential to recognise it, particularly in patients on anticoagulants, because of its mortality rate, which ranges from 4% to 25% [3].

In addition to abdominal trauma, the main risk factors include abdominal procedures (surgery, paracentesis, peritoneal dialysis), use of anticoagulants and strenuous physical exertion, such as coughing [4].

Clinically, this manifests itself as abdominal pain associated with a palpable mass. The pain is generally acute, without radiating, and may affect all quadrants of the abdomen. The haematoma can also spread easily to the pelvis, due to the absence of posterior fascia at the bottom of the rectus muscle. Cullen's and Grey Turner's signs, similar to those of pancreatitis, may be present, indicating bleeding from the umbilicus and flanks. If pain persists or increases on abdominal contraction (Carnett's sign), this suggests involvement of the abdominal wall. If there is a palpable mass that does not cross the midline and remains palpable on contraction, the origin is probably parietal (Fothergill's sign) [5].

Diagnosis is based on imaging, with abdominal ultrasound having a sensitivity of 80 - 90% and an abdominal CT scan, which remains the tool of choice with a sensitivity and specificity of 100%. CT scans are also useful for classifying haematomas into three types according to severity. The classification by Berna., *et al.* distinguishes between types I, II and III, depending on the extent of the lesion. In type I, the haematoma is intramuscular, unilateral, fusiform and resolves within a month. In type II, the bleeding dissects the fascia transversalis, may be bilateral and resolves in 2 to 4 months. Finally, type III involves propagation into the peritoneal cavity [6,7].

Given that rectus abdominis haematoma is a relatively rare condition with highly variable manifestations, other differential diagnoses must also be taken into account depending on the location of the patient's pain, namely appendicitis, diverticulitis, biliary colic, urinary tract infections, tumours and hernias [8].

Clinical monitoring and haemoglobin analyses are essential. The majority of cases resolve autonomously with a stable haemodynamic state, and treatment remains conservative, focusing on pain management and haemostasis. In cases of haemodynamic instability, volume filling and invasive haemorrhage control, such as embolisation or vascular ligation, may be required [9].

Conclusion

Abdominal rectus sheath haematoma is a rarely seen condition, often misdiagnosed as an acute abdomen. Prompt management of the medical history, together with a meticulous physical examination and appropriate imaging tests, can establish the correct diagnosis and avoid unnecessary laparotomies. Computed tomography (CT) appears to be the most appropriate imaging option. Treatment is generally conservative in most cases, including bed rest, analgesia, intravenous rehydration and blood transfusions where necessary.

Conflict of Interest Statement

The authors declare that there is no conflict of interest.

All authors confirm that they have obtained written consent from the patient for publication of the article.

Author Contributions

All authors contributed equally to this work.

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Ethical Approval

No ethical approval is required for de-identified single case reports based on our institutional policies.

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