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Case Study

Anticoagulant-Induced Right Rectus Sheath Hematoma in a Patient on Acenocoumarol

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ABSTRACT

Rectus sheath hematoma is a serious problem that can cause severe abdominal pain. This pain is often seen in people who are taking therapy. Acenocoumarol, which is also known as Acitrom is a medicine that is used to prevent and treat blood clots. However taking this medicine can increase the risk of bleeding especially if the dose is too high. We are talking about a patient who developed a rectus sheath hematoma on the side after taking Acenocoumarol. The patient had abdominal pain on the right side, swelling and tenderness but there was no major injury. Blood tests showed that the patient had an International Normalized Ratio, which means that the blood was too thin. Imaging tests, including an ultrasound and a computed tomography scan confirmed that the patient had a rectus sheath hematoma on the side. The patient was treated without surgery. The doctor stopped the Acenocoumarol gave the vitamin K, pain killers and other supportive care. The patient was closely. The symptoms slowly got better. This case shows how important it is to consider rectus sheath hematoma as a cause of abdominal pain in patients who are taking anticoagulant therapy. It is crucial to diagnose and treat the problem quickly to prevent complications, like shock and anemia. Regular checks of International Normalized Ratio levels and teaching the patient about the risks of anticoagulant therapy are very important to prevent problems. In conclusion rectus sheath hematoma is a serious problem that can happen to people who are taking Acenocoumarol. Doctors need to be aware of this problem and diagnose it quickly so that they can treat it effectively. Rectus sheath hematoma requires treatment to prevent serious complications.

INTRODUCTION

Rectus sheath hematoma (RSH) is an uncommon but clinically significant condition characterized by the accumulation of blood within the rectus

abdominis muscle sheath, usually resulting from rupture of the superior or inferior epigastric vessels or direct muscle injury (1). Although rare, its incidence has increased in recent years due to

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the widespread use of anticoagulant therapy (2). Among commonly used oral anticoagulants, Acenocoumarol, marketed as Acitrom, is frequently prescribed for thromboembolic disorders such as atrial fibrillation, deep vein thrombosis, and prosthetic heart valve replacement. However, its therapeutic use is associated with an increased risk of bleeding complications, particularly in cases of over-anticoagulation (3).

Clinically, RSH often presents with acute abdominal pain, localized swelling, and tenderness, which may mimic other causes of acute abdomen, thereby posing a diagnostic challenge (4). Several predisposing factors have been identified, including advanced age, trauma, vigorous coughing, hypertension, and elevated International Normalized Ratio (INR) levels due to excessive anticoagulation (2,5). Early recognition is crucial to prevent unnecessary surgical intervention and to reduce morbidity.

Imaging plays a key role in diagnosis, with ultrasonography serving as an initial modality, while computed tomography (CT) scan remains the gold standard for confirming the diagnosis and determining the extent of the hematoma (1). Most cases of rectus sheath hematoma can be managed conservatively with discontinuation of anticoagulant therapy, reversal of coagulopathy using vitamin K, and supportive care. However, severe cases may require blood transfusion or interventional procedures (3).

This case report highlights a rare presentation of right-sided rectus sheath hematoma associated with Acenocoumarol therapy, emphasizing the importance of early diagnosis, careful monitoring of anticoagulation status, and prompt management to prevent life-threatening complications.

MATERIALS & METHODS

Study Design: Single-patient case report

Diagnostic Tool Used: CT Scan of abdomen and laboratory investigation.

Data Sources: Clinical presentation, physical examination, imaging findings

Ethical Considerations: Patient identity not disclosed

CASE PRESENTATION

Female patient, aged 55 years, presented to the emergency room complaining of abdominal pain for three days. The pain was accompanied by nausea and continued to get worse. It started gradually and seemed to be focused on the right side of the abdomen; at times, it radiated down into the lower back. She had no history of trauma, vomiting, or fever, and there were no issues with urination at the time of her visit to the ER.

This patient had been diagnosed with rheumatic heart disease (RHD), and had received a mechanical valve replacement 12 years ago. She had been on long term anticoagulant therapy in the form of Acitrom. There was no prior history of any similar symptoms.

Upon examination by the physician, the patient appeared to be awake, alert and oriented; vital signs were stable. On abdominal examination, there was localized tenderness on the right side of the abdomen, with no musculature guarding or rigidity. Bowel sounds were present.

Lab work demonstrated abnormalities in the complete blood count, including anemia (Hb ~ 6.5 g/dL) and elevated INR (3.0); these findings indicate that this patient had received too much



anticoagulant. Other lab values were within normal limits.

An ultrasound of the abdomen suggested that between the right and left rectus muscles lay an area of hemangioma, likely from a hematoma formed from bleeding into the muscle due to excess use of anticoagulation. A CT scan of the abdomen confirmed that multiple hematomas were located within the anterior abdominal muscle wall, and that mild hemoperitoneum had occurred. One incidental finding during the CT scan was a spot on the right kidney, which could be either a cyst or abscess.

DISCUSSION

Rectus sheath hematoma (RSH) is a relatively uncommon but increasingly recognized clinical entity, particularly in patients receiving anticoagulant therapy. The widespread use of oral anticoagulants such as Acenocoumarol (Acitrom) has contributed to a rise in the incidence of spontaneous bleeding complications, including RSH (6). The condition results from rupture of the epigastric vessels or tearing of rectus muscle fibers, often precipitated by minimal trauma, coughing, or sudden muscular strain in anticoagulated patients (7).

In the present case, the development of right-sided rectus sheath hematoma can be attributed to excessive anticoagulation, as evidenced by elevated INR levels. Studies have shown that anticoagulant therapy is one of the most significant risk factors for RSH, accounting for a substantial proportion of cases (8). Elderly patients and those with comorbid conditions such as hypertension are particularly susceptible due to increased vascular fragility (9).

Clinically, RSH may mimic other causes of acute abdomen such as appendicitis, diverticulitis, or

abdominal wall tumors, making diagnosis challenging. The presence of localized abdominal pain, a palpable mass, and a positive Carnett's sign can aid in distinguishing abdominal wall pathology from intra-abdominal causes (7,10). Imaging plays a crucial role, with computed tomography (CT) scan considered the most sensitive and specific modality for diagnosis, allowing accurate localization and assessment of hematoma size and severity (6).

Management of RSH depends on the severity and hemodynamic stability of the patient. Most cases, including the present one, can be managed conservatively with cessation of anticoagulant therapy, administration of vitamin K, fluid resuscitation, and close monitoring (8). Interventional radiology techniques such as arterial embolization or surgical exploration are reserved for patients with ongoing bleeding, large hematomas, or hemodynamic instability (9).

Early recognition and prompt management are essential to reduce morbidity and mortality associated with this condition. This case highlights the importance of careful monitoring of anticoagulation therapy and maintaining therapeutic INR levels to prevent such complications.

RESULT

Rectus sheath hematoma is a rare but significant complication of anticoagulant therapy, particularly with drugs like Acenocoumarol (Acitrom). This case highlights that patients on anticoagulants presenting with acute abdominal pain should be carefully evaluated for abdominal wall hematoma. Early diagnosis using imaging, prompt discontinuation of anticoagulant therapy, and appropriate conservative management can lead to favorable outcomes. Careful monitoring of INR levels is essential to prevent such complications.



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