



**Olgu Sunumu / Case Report**

**Rectus Sheath Hematoma Mimicking Acute Abdominal Pain**

**Akut Karını Taklit Eden Rektus Kası Hematomu**

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**ABSTRACT**

Abdominal sheath hematoma is a rare cause of acute abdominal disorders and may be misdiagnosed from other causes of abdominal pain. Early diagnosis is mandatory in order to avoid morbidity or unnecessary surgery. We describe a case of an 55-year-old men receiving anticoagulants who presented with typical clinical manifestations of acute surgical abdomen. A computed tomography scans demonstrated a right rectus sheath hematoma. The patient was treated conservatively with success. It is important to recognize this entity of rectus sheath hematoma among patients complaining of acute abdominal pain.

**Key Words:** Abdomen rectus muscle; Acute abdominal; Anticoagulant agents.

**ÖZET**

Karın duvarı hematomu akut karının nadir sebebi olup diğer akut karın nedenleri ile karışabilir. Gereksiz cerrahi ve morbiditeden kaçınmak için erken tanı zorunludur. Antikoagülan tedavi alan 55 yaşında tipik akut karın ağrısı ile başvuran erkek hastayı sunmaya çalıştık. Bilgisayarlı tomografi sağ rektus kılıf hematomunu gösterdi. Hasta konservatif olarak başarılı şekilde tedavi edildi. Akut karın yakınması ile başvuran hastalarda rektus kas hematomunu tanısı ayırıcı tanıda dikkate alınmalıdır.

**Anahtar Kelimeler:** Karın rektus kası, akut karın, antikoagülan ajan

## INTRODUCTION

Abdominal pain is a common problem in the ED. Abdominal sheath hematoma is a rare cause of acute abdominal disorders and may be misdiagnosed from other causes of abdominal pain. It is an uncommon cause of acute abdomen, known to mimic various surgical conditions such as acute cholecystitis, appendicitis, ruptured abdominal aortic aneurysm, sigmoid diverticulitis, abruptio placenta, ectopic pregnancy and ovarian cyst torsion<sup>1</sup>. Although the etiology includes trauma, abdominal operations, subcutaneous drug injections, hemotological diseases, coughing, physical exercise, pregnancy, spontaneously, it rarely occurs anticoagulant therapy<sup>2,3</sup>. It can be potentially fatal in the patients, and a prompt diagnosis is essential<sup>1</sup>. We present a case report of rectus sheath hematoma conservatively managed.

## CASE REPORT

A 55 years old man presented to the emergency department with complaints abdominal pain in the right lower quadrant, and bluish discoloration at same area. He denied any history of trauma before admission. He had a history of mitral valvuloplasty 4 years ago because of mitral stenosis. The patient had been taking warfarin sodium 5 mg/day for atrial fibrillation for 4 years. Physical examination showed him to be afebrile, with blood pressure of 120/70 mm Hg and irregular pulse of 90 beats/min. Abdominal examination revealed a tender, rebound in the right lower quadrant. There were ecchymoses in the same area. The rest of abdomen was soft and there was no organomegaly. Abdominal ultrasonography (USG) and laboratory tests studies were planned. Laboratory studies showed a white blood cell count of a 7900/mm<sup>3</sup>, hemoglobin level of 11.5 g/dL, hematocrit level of 31% and a platelet count of 282,000 cells/mm<sup>3</sup>. Electrolyte measurement, renal function test results and urinalysis were normal. The international normalized ratio (INR)

was 1.48 and the partial thromboplastin time was 17.5 sec. Abdominal ultrason was hypoechoic image of 12x8 cm which layed from the right lower quadrant to midline and thus abdominal computed tomography (CT) was obtained. ACT scan of the abdomen (Figure 1) with contrast showed a mass of non homogeneous density in the right rectus sheath hematoma. A large rectus sheath hematoma a pelvic extension and non active bleeding was diagnosed. His warfarin sodium was stopped. The patient was hospitalized and received enoxaparin 0.6 subcutaneously and intravenous hydration. The patient was followed up for 48 hours in the surgery department and discharged with no complication. He was completely free of symptoms during follow-up visit, and the hematoma resolved spontaneously 15 days.



**Figure 1.** CT scan of the abdomen with contrast showed a mass of non homogeneous density in the right lower quadrant rectus sheath hematoma.

## DISCUSSION

Rectus sheath haematomas are difficult to diagnose clinically and may mimic a number of other acute abdominal conditions. Historically, a significant number of patients have undergone exploratory laparotomies because of the difficulty in distinguishing between rectus sheath haematoma and other intra-abdominal disorders<sup>4</sup>.

On admission, our patient's presentation was mimicking acute appendicitis. Common presenting signs and symptoms are abdominal pain, abdominal wall mass, decrease in hemoglobin, fever, peritoneal irritation, abdominal wall ecchymosis, vomiting and nausea<sup>5</sup>. Abdominal pain, abdominal wall ecchymosis, peritoneal irritation and decrease in hemoglobin were detected in our patient. There was no abdominal wall mass. Anticoagulation has been described as an important aetiological factor; other rarer associations include recent abdominal surgery, medication injection, trauma, and increased abdominal pressure from straining, coughing or pregnancy<sup>6</sup>. In our patient's bleeding depended on anticoagulant therapy. Superior and inferior epigastric vessels run along the posterior border of the muscle within the sheath along its entire course. Tearing of these vessels or rupture of the rectus abdominis muscle causes hematoma<sup>7</sup>. The diagnosis should be suspected on clinical grounds. Abdominal ultrasonography, computed tomography, and magnetic resonance scanning can be used for the diagnosis<sup>8</sup>. CT is superior to USG in localisation, extension and evaluation of the size of hematoma. RSH can be classified into three subtypes based on CT appearance. Management strategy depends on the clinical condition and CT severity grade. According to the CT classification, Type 1 hematomas are mild and the hematoma occurs within the muscle with an increase in muscle length and do not require hospitalisation. Type 2 hematomas are moderate, the hematoma is within the muscle but bleeding occurs into the space between transversalis fascia and the muscle. Type 3 hematomas are severe and located between transversalis fascia and the muscle, anterior to the peritoneum and urinary bladder. Type 1 and Type 2 hematomas require hospitalisation. In Type 1 hematomas hospitalisation is not usually required and the hematoma resorbs within 30 days. In Type 2 lesions bed rest, intravenous fluid replacement and analgesia is the appropriate treatment. In Type 3 lesions additional blood product

transfusions are required<sup>2-9</sup>. In our case, a moderate type 2 hematoma was present, which seemed to have been resorbed after 15 days of follow up. Most rectus sheath hematomas can be treated conservatively with analgesia, treatment of predisposing conditions and cessation of anticoagulation. When necessary, fluid resuscitation and reversal of anticoagulation and/or antiplatelet therapy should be carried out with expert advice from haematologists. Active bleeding can be managed either surgically by evacuating the hematoma and ligating the bleeding vessels or radiologically with catheter embolisation<sup>10</sup>. In our patient was stopped warfarin. The patient was received enoxaparin with recommendation from cardiologist. For the emergency physicians, accurate differential diagnosis of potentially fatal acute abdominal pain is crucial because it can determine appropriate treatment. Rectus sheath hematoma is a rarely seen entity often misdiagnosed acute abdomen. CT is the diagnostic modality of choice. Conservative treatment is feasible in most cases. Early diagnosis is mandatory in order to avoid morbidity or unnecessary surgery.

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