

A Case of Acute Coronary Syndrome complicated by a Large Rectus Sheath Hematoma

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Citation

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Abstract

We present a 75-year-old female patient admitted to our clinic with the diagnosis of acute coronary syndrome (ACS) (high risk unstable angina pectoris) who developed a large rectus sheath hematoma one day after low molecular weight heparin (LMWH) (enoxaparin) treatment was started.

INTRODUCTION

Rectus sheath hematoma (RSH) is a rare, but well-documented clinical entity. The diagnosis of this condition may be difficult unless a high index of suspicion is maintained. It may occur spontaneously or as a result of direct trauma, twisting or abrupt changes in position. In addition, possible risk factors are as follows: increasing age, anticoagulant therapy, increased intra-abdominal pressure from coughing or pregnancy, recent surgery and medication injections. We, herewith, present a case admitted to our clinic with the diagnosis of acute coronary syndrome (ACS) (high risk unstable angina pectoris) and then developing a large rectus sheath hematoma one day after low molecular weight heparin (LMWH) (enoxaparin) treatment was started.

CASE REPORT

A 75-year-old female patient (71 kg) was admitted to our clinic with ACS (high risk unstable angina pectoris). The patient had been admitted to our clinic with the same disease 2.5 years ago, and on coronary angiography (CAG) she had been diagnosed with severe three-vessel coronary artery disease. The patient having refused coronary artery bypass graft operation (CABGO) had continued medical treatment till her second admission. She was treated with metoprolol (100 mg/day), ramipril (5 mg/day), atorvastatin (40 mg/day), aspirin (100 mg/day), clopidogrel (75 mg/day) and subcutaneous enoxaparin (1 mg/kg/12 h)

On admission day, physical examination was unremarkable, with blood pressure of 125/60 mmHg, and pulse of 76 beats/min. At the time of admission, she had no angina pectoris. She was in normal sinus rhythm on the

electrocardiography (ECG), and no ischemic ECG changes were detected. Mild systolic dysfunction (ejection fraction 45%) was found at transthoracic echocardiography.

Laboratory findings on admission were as follows: CK-MB-4.51 ng/ml (normal 0.3-4.0 ng/ml), troponin I - 0.24 ng/ml (normal 0-0.03 ng/ml), hemoglobin - 12.3 g/dL, platelet - 329.000 cells/mm³, international normalized ratio (INR) 1.06 and active partial thromboplastin time (a PTT) - 27.3 sec. Electrolyte measurement, renal function test results, and urinalysis were unremarkable.

Coronary angiography followed by CABGO was planned after obtaining consent from the patient. On the second day (nearly three hours after receiving the third dose of enoxaparin) patient complained of severe abdominal pain; examination revealed a palpable, firm, tender and nonmobile left abdominal mass.

Blood pressure was 100/50 mmHg and pulse rate 92 beats/min. During this time, intermittent chest pain attacks, some of which were accompanied by ischemic ECG changes, started. Abdominal ultrasound confirmed a 13.8 cm left rectus sheath cystic mass. Therefore, enoxaparin was discontinued. Repeated laboratory values included a hemoglobin level of 7.0 g/dL, a platelet count 305.000 cells/mm³, INR 1.37 and a PTT 26.8 sec. The transfusion of erythrocyte suspension and fresh-frozen plasma (FFP) was started. Hemoglobin value increased to 9.8 g/dL. Abdominal computed tomography showed a large left-sided heterogeneous rectus sheath hematoma (14.6 cm) (Figure). After general surgical consultation, surgical removal of the hematoma was decided upon. However, approximately 5

hours after 2 units of FFP were administered, a sudden severe chest pain, occurred ; soon she developed cardiac arrest from which she could not be resuscitated.

Figure 1

Figure: CT scan showing rectus sheath hematoma. Arrowheads; fluid–fluid levels



DISCUSSION

Although abdominal wall hematoma is a documented complication of intravenous unfractionated heparin and oral anticoagulants, its occurrence in conjunction with the subcutaneous enoxaparin use is extremely uncommon^{1,2,3,4}. Rectus sheath hematoma, although uncommon, should be considered in patients with acute abdominal pain, especially in the elderly female patients exposed to anticoagulant treatment. Current guidelines for immediate reversal of anticoagulation recommend administration of vitamin K₁ and factor replacement with either factor concentrates or FFP⁵. Although RSH usually is self-limiting and can be managed conservatively^{6,7}, embolism of the epigastric artery or surgical treatment may be necessary in some patients².

Although discontinuation of anticoagulation carried high risk in this patient, we had to resort this to keep the bleeding under control. We were planning to undertake surgical treatment of the ACS soon after control of bleeding,; unfortunately the patient succumbed before CABGO could be performed

The appropriate treatment for a patient with major bleeding such as rectus sheath hematoma depends on both the confidence in the diagnosis of the type of bleeding and the patient's hemodynamic status and comorbid conditions. Similarly, the decision to transfuse would depend on the same parameters: hemodynamic status and comorbid conditions such as the active coronary ischemia or the severe anemia stemming from bleeding as in our patient. Although expectant therapy is most commonly recommended, occasional cases require surgical evacuation of the hematoma and ligation of the offending epigastric vessel. Some authors recommend surgical treatment in all cases^{8,9}.

We think our case is significant in terms of reminding us to reconsider which medical choice would be more appropriate in patients with ACS accompanied by major bleeding, for whom discontinuation of anticoagulation carries high risk.

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