

# Acute abdominal pain in a patient receiving enoxaparin

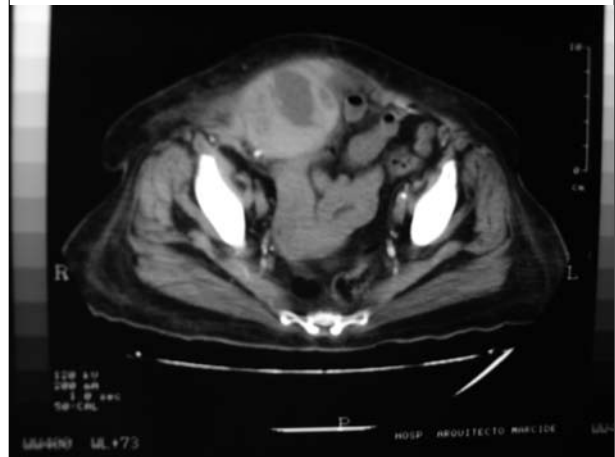
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## CASE REPORT

A 73-year-old woman with ischaemic heart disease, permanent atrial fibrillation, and chronic renal failure complained of a sudden onset of severe abdominal pain. She had been hospitalised 13 days earlier because of a head injury with impaired consciousness and periorbital haematoma. During that hospitalisation her treatment with acenocumarol was interrupted and enoxaparin, 60 mg subcutaneously every 12 hours, was administered. On physical examination, a tender mass was felt in the right lower abdominal quadrant. Laboratory analyses revealed the following: The haemoglobin level was decreased from 7.50 mmol/l to 6.2 mmol/l (normal 7.45 to 9.30 mmol/l), the partial thromboplastin time was 45 seconds (normal 22 to 37 seconds), the prothrombin time was 13 seconds (an international normalised ratio of 1.09), the serum creatinine level was 167.96  $\mu\text{mol/l}$  (normal 50 to 110  $\mu\text{mol/l}$ ), and the estimated glomerular filtration rate value was 28 ml/min/1.73 m<sup>2</sup>. A computed tomography scan (figure 1) was obtained.

Figure 1. Abdominal CT scan



## WHAT IS YOUR DIAGNOSIS?

See page 244 for the answer to this photo quiz.

ANSWER TO PHOTO QUIZ (ON PAGE 243)

ACUTE ABDOMINAL PAIN IN A PATIENT RECEIVING ENOXAPARIN

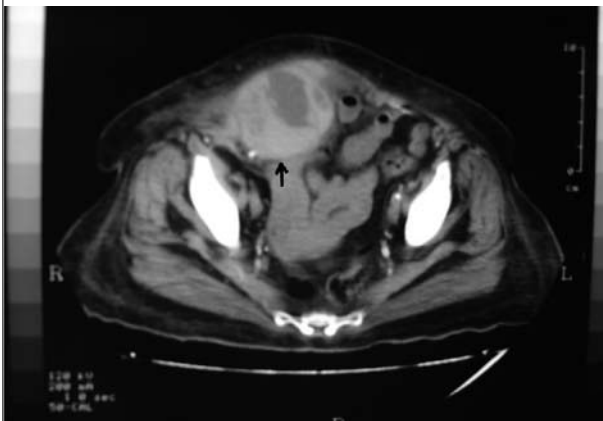
DIAGNOSIS

The computed tomography scan showed a haematoma expanding in the lower half of the right rectus sheath (*figure 2*, arrow). Enoxaparin was discontinued, and the patient made a gradual clinical recovery with conservative treatment.

Rectus sheath haematoma is an uncommon but serious bleeding complication associated with, among other causes, anticoagulant and antiaggregant therapies. It may be misdiagnosed as appendicitis, cholecystitis, torsion of an ovarian cyst, or acute pancreatitis.<sup>1</sup> In cases following

administration of enoxaparin subcutaneously into the abdominal wall, it can occur as a result of accidental direct damage to the muscle itself or to the epigastric vessels. Likewise, because renal function plays an important role in the clearance of enoxaparin, patients with renal insufficiency who are receiving therapeutic doses of enoxaparin have an increased risk for bleeding that may be attributable to an elevated level of anti-Xa. Thus, several authors<sup>2</sup> recommend a reduction in enoxaparin dosing in patients with a creatinine clearance lower than 30 ml/min. Our patient had severe renal failure which could contribute to her bleeding. Rectus sheath haematoma is managed conservatively in the majority of patients. Surgical intervention may be necessary with large haematomas with haemodynamic instability, and endovascular embolisation is a suitable alternative to surgical treatment in cases in which the haematoma continues to expand.<sup>3</sup>

**Figure 2.** Computed tomography scan showing a haematoma (arrow) in the rectus sheath



REFERENCES

1. James RF. Rectus sheath haematoma. *Lancet*. 2005;365:1824.
2. Lim W, Dentali F, Eikelboom JW, Crowther MA. Meta-analysis: low-molecular-weight heparin and bleeding in patients with severe renal insufficiency. *Ann Intern Med*. 2006;144:673-84.
3. Holmes SJ, Yale SH, Mazza JJ. Rectus sheath hematoma as a cause of acute abdominal pain. *Am Fam Physician*. 2001;64:1681-2.