

**Retroperitoneal Hematomun Neden Olduğu Nadir Bir Anemi Olgusu****A Rare Case of Anemia Caused by Retroperitoneal Hematoma**Ahmet UZUN<sup>1</sup> , Bora ÇEKMEN<sup>1</sup> , Arzu BOZTAŞ<sup>2</sup> <sup>1</sup>Karabük University Faculty of Medicine, Department of Emergency Medicine, Karabük, Turkey<sup>2</sup>Karabük University Faculty of Medicine, General Surgery, Karabük, Turkey**Öz**

**Giriş:** Enoksaparin tedavisi ile retroperitoneal kanama bildirilmiştir. Bu yazıda derin ven trombozuna bağlı enoksaparin kullanan bir hastada gelişen spontan retroperitoneal kanama tartışılmıştır.

**Vaka:** Yetmiş altı yaşında erkek hasta, halsizlik şikayeti ile acil servise başvurdu. Hastanın yakın geçmişte derin ven trombozu için enoksaparin kullanım öyküsü mevcut. Fizik muayene, üst ekstremitelerde bilateral enoksaparin uygulanan bölgelerde subkutan minimal hematoma dışında doğaldı. Laboratuvar testlerinde hemoglobin: 4.6 g/dl, üre: 158 mg/dl ve kreatinin: 1.86 mg/dl olarak belirlendi. Abdominopelvik BT'de; sağ psoas kası komşuluğunda 4 cm derinliğe ulaşan retroperitoneal hemoraji tespit edildi. Takiplerinde taze donmuş plazma ve eritrosit süpsansiyonu replasmanı sonrası ek komplikasyon gelişmeyen, cerrahi tedavi ihtiyacı olmayan hasta, yatışının 17. gününde iyilik hali ile taburcu edildi.

**Sonuç:** Enoksaparin tedavisi gören hastalar halsizlik şikayeti ile başvurduğunda anemi varlığında majör kanamalar görülebilir. Bu hastalarda kanama odağı açısından retroperitoneal kanama konusunda dikkatli olunmalıdır.

**Anahtar Kelimeler:** anemi, retroperitoneal hematoma, enoksaparin

**Abstract**

**Introduction:** Retroperitoneal hemorrhage has been reported with enoxaparin therapy. In this article, spontaneous retroperitoneal hemorrhage developed in a patient using enoxaparin due to deep vein thrombosis is discussed.

**Case Report:** A seventy-six-year-old male patient was admitted to the emergency department with the complaint of fatigue. Our patient had been used enoxaparin for deep vein thrombosis in the recent past. In the physical examination was natural except subcutaneous minimal hematoma in the upper extremity bilateral enoxaparin areas. In laboratory tests, hemoglobin: 4.6 g / dl, urea: 158 mg / dl and creatinine were determined as 1.86 mg / dl. Abdominopelvic computed tomography imaging were performed and retroperitoneal hemorrhage reaching a depth of 4 cm adjacent to the right psoas muscle was detected. The patient, who did not develop additional complications after fresh frozen plasma and erythrocyte suspension replacement during the intensive care follow-ups and did not need surgical treatment, was discharged on the 17th day of his hospitalization in good health.

**Conclusion:** When patients under enoxaparin treatment present with the complaint of fatigue, major bleeding may be seen when anemia is detected. One should be vigilant in terms of retroperitoneal bleeding as the bleeding focus in these patients.

**Keywords:** anemia, retroperitoneal hematoma, enoxaparin

**INTRODUCTION**

A significant number of patients with a primary diagnosis of deep vein thrombosis (DVT) present to the emergency department every year (1). One of the home treatment methods in patients with deep vein thrombosis is Low-Molecular-Weight Heparin (LMWH) (2). LMWH has become a good alternative to unfractionated heparin due to its

efficacy and safety, improved pharmacokinetics, longer half-life, its ability to be administered subcutaneously once or twice a day, and with no requirement of laboratory monitoring (3). Enoxaparin is antithrombotic LMWH. Mortal complications such as local minor hemorrhages at the injection site or the intervention site, abdominal wall, rectus sheath hemorrhages, intraocular and intracranial hemorrhages can be

seen depending on the use of enoxaparin, but rarely major bleeding may also be seen (4).

A rare case of spontaneous retroperitoneal bleeding developed in a patient using LMWH due to deep vein thrombosis is discussed in this article.

### CASE REPORT

A seventy-six-year-old male patient was admitted to the emergency department of the 3rd level training and research hospital with the complaint of fatigue. The patient, who did not have any comorbid disease in his history, was admitted to our emergency department 5 days ago due to swelling and redness in the left leg, and he was discharged home with enoxaparin 6000 IU subcutaneous treatment due to acute DVT detected in the lower extremity dopes. Measured blood pressure: 110/70 mmHg, pulse: 99 / min, Fever: 36.5°C, Respiratory Rate: 16 / min. In the physical examination, the patient did not have abdominal pain, back pain, and flank pain. Abdominal examination was natural, and there was subcutaneous minimal hematoma in the upper extremity bilateral enoxaparin areas. Hemoglobin: 4.6 g / dl, Hematocrit: 14.5%, Platelet: 640 000 / mm<sup>3</sup> INR: 1.06, PT: 11.5 / Sec, aPTT: 160.4 / Sec, Urea: 158 mg / dl and Creatinine were determined as 1.86 mg / dl. Rectal examination was normal stool contamination. Thorax and abdominopelvic computed tomography (CT) imaging were performed in terms of bleeding focus. Retroperitoneal hemorrhage reaching a depth of 4 cm adjacent to the right psoas muscle was detected in abdominopelvic CT (Figure-1). Hemogram decline of the patient was attributed to retroperitoneal bleeding. General surgery and cardiovascular surgery consultations were requested. The patient was taken to the general surgery intensive care unit for the continuation of the treatment. The patient, who did not develop additional complications after fresh frozen plasma and erythrocyte suspension

replacement during the intensive care follow-ups and did not need surgical treatment, was discharged on the 17th day of his hospitalization in good health.

### DISCUSSION

The patient, who was admitted to the emergency department with the complaint of fatigue, anemia, and acute renal failure, and under treatment with LMWH, was diagnosed with a retroperitoneal hematoma, which can be seen as an anemia etiology, treatment complication and can be triggered by acute renal failure. In this case, the patient did not describe any pain, had laboratory impairment without deterioration in vital values, and no significant findings on physical examination, suggesting that patients with retroperitoneal hemorrhage can present to the hospital with atypical clinical features.

Retroperitoneal hemorrhage is a condition that can be fatal and requires rapid diagnosis and treatment (5). Retroperitoneal bleeding can often be seen as a complication of trauma, tumors, vascular lesions, surgical interventions, and anticoagulant therapy. Patients with spontaneous retroperitoneal bleeding may present to the emergency department with different clinical signs and symptoms. The most common symptoms are abdominal pain, leg pain, hip pain, and back pain (5). Sometimes patients may present with ecchymosis in the periumbilical or flank area (Cullen and Gray-Turner signs) (6). The gold standard method for detecting retroperitoneal bleeding is abdominopelvic computed tomography.

Retroperitoneal bleeding due to LMWH is not common. The bleeding rate due to LMWH was found to be 11.2% among patients who used anticoagulants and had retroperitoneal bleeding in a series of 346 patients in the literature (5). Mortality in anticoagulant-related retroperitoneal hemorrhage was found to be 20% in another literature review (7). Clinicians should be careful and keep in mind about

retroperitoneal bleeding in patients under LMWH (Enoxaparin) treatment in the presence of hypotension, abdominal distension, abdominal and back pain, drop in hemoglobin level, and signs of peritoneal irritation (8). LMWHs can be applied at a dose suitable for weight without requiring laboratory monitoring. The elimination half-life of LMWH is 3 to 6 hours after subcutaneous administration, and it is independent of dose, unlike standard heparin. Since the elimination of LMWH is primarily through the kidneys, the half-life of LMWH is prolonged in patients with renal failure, its elimination is delayed and the tendency to bleeding increases accordingly (9). There were low hemoglobin and fatigue in our patient. Retroperitoneal bleeding was detected in abdominopelvic computed tomography imaging and treated. Again, in our patient, the creatinine value was measured as 1.86 mg/dl and an increase was found compared to the basal values. Retroperitoneal bleeding was detected in our patient on the 5th day of enoxaparin treatment as seen in the literature (10). However, the most common complaints such as abdominal pain and back pain were not observed in our patient, and no findings suggesting retroperitoneal bleeding were found in his physical examination.

## CONCLUSION

Retroperitoneal hemorrhages due to LMWH can be seen. When patients under LMWH treatment present with the complaint of fatigue, major bleeding may be seen when anemia is detected. One should be vigilant in terms of retroperitoneal bleeding as the bleeding focus in these patients. It should also be kept in mind that renal dysfunction may increase the possibility of bleeding in these patients.

**Informed Consent:** Written consent was obtained from the participants.

**Conflict of Interest:** Authors declared no conflict of interest.

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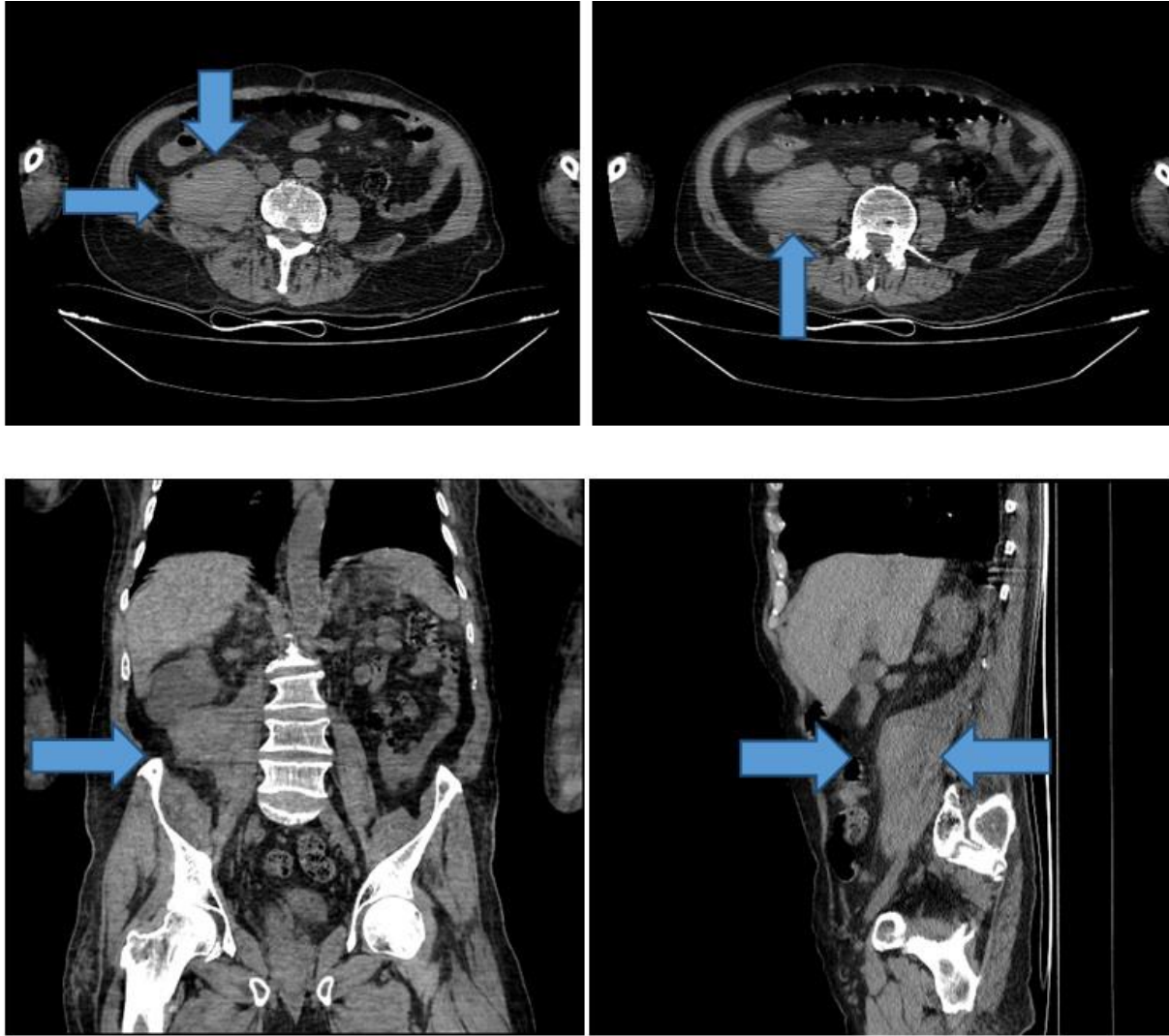


Figure 1. 4 cm retroperitoneal bleeding adjacent to the psoas muscle on the right