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Spontaneous retroperitoneal hematoma after treatment with streptokinase for acute myocardial infarction: A case report

Streptokinaz ile tedavi edilen akut miyokart infarktüsünde gelişen retroperitoneal hematom: Olgusu sunumu

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Abstract

Retroperitoneal hematoma (RPH) is a potentially life threatening condition commonly associated with trauma, vascular lesions, surgical intervention and anticoagulant therapy which may occasionally be seen as an idiopathic presentation. Treatment of RPH is usually supportive, with only a minority of cases undergoing surgical intervention. A 78 year old female diagnosed with acute myocardial infarction (anterior) received streptokinase treatment. She had severe left side pain, back pain and thigh pain following streptokinase administration. Paresthesia and movement restriction developed in her left lower extremity. The patient reported no history of trauma, falling or anticoagulant use. CT was performed due to suspected intraabdominal hemorrhage, and a lesion consistent with hematoma was detected in the retroperitoneal area. Subsequently, anticoagulant medications were discontinued and the patient received erythrocyte suspension. Size of the hematoma was not increased in the follow-up abdominal USG. Upon regression of her clinical complaints and with stable vital findings, the patient was discharged and scheduled for a control visit. We would like to report this case as streptokinase related RPH cases are rare in the literature.

Keywords: Acute myocardial infarction, retroperitoneal hematoma, streptokinase

Özet

Retroperitoneal hematom (RPH) çoğunlukla travma, vasküler lezyonlar, cerrahi girişim, antikoagulan tedavi ve bazen de idiyopatik olarak görülebilen ve ölümcül seyredabilen bir durumdur. Çoğunlukla destek tedavisinin yapıldığı, çok az vakada cerrahi girişimin uygulandığı bir durumdur. Akut miyokart infarktüsü (Anterior) tanısıyla 78 yaşındaki bayan hastaya streptokinaz tedavisi verildi. Streptokinaz sonrasında şiddetli sol yan ağrısı, sırt ağrısı ve uyluk ağrısı başladı. Sol alt ekstremitede hareket kısıtlılığı ve parastezi gelişti. Herhangi bir travma, düşme yada antikoagulan kullanım öyküsü yoktu. Hastaya intraabdominal kanama şüphesi ile abdominal BT çekildi ve retroperitoneal alanda hematom ile uyumlu lezyon gözlemlendi. Bunun üzerine hastanın antikoagulan ilaçları kesildi ve hastaya eritrosit süspansiyonu verildi. Hastanın abdomen USG ile takiplerinde hematom boyutlarında artma gözlenmedi. Klinik olarak şikayetleri gerileyen vital bulguları stabil seyreden hasta kontrole çağrılarak taburcu edildi. Literatürde streptokinaza bağlı RPH vakası nadir bulunmasından ötürü bu vakayı paylaşmayı uygun buluyoruz.

Anahtar Kelimeler: Akut miyokart infarktüsü, retroperitoneal hematom, streptokinaz

Introduction

Acute myocardial infarction (AMI) is one of the leading causes of morbidity and death. By the introduction of thrombolytics, the prevalence of AMI-related death decreased (1). Currently, primary percutaneous coronary intervention (PCI), if performed in a timely fashion, is the preferred treatment, however, thrombolytic therapy is still used commonly (2). Therefore, complications

due to thrombolytic use occur. Hemorrhage and allergic reactions can be listed among those complications. Intracranial hemorrhage is the most serious among hemorrhagic complications, and the mortality is over 50% (1). Retroperitoneal hematoma (RPH) usually occurs as a result of trauma, vascular lesions, tumors, surgical procedures, and anticoagulative therapy (3), but, although rarely, it may occur due to thrombolytic agents (4).

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Case Report

A 78-year-old woman was admitted to a hospital with the diagnosis of anteroseptal myocardial infarction at six hours of onset. Her medical history included hypertension, diabetes mellitus, and hyperlipidemia. Her vital signs included a blood pressure of 140/90 mmHg, a heart rate of 88 beats/min, and other clinical physical examination findings were unremarkable. Laboratory tests conducted at the emergency room revealed that hemoglobin concentration was 12 g/dL, hematocrit level was 38 %, and platelets were 347 000/mm³. Her basic metabolic panel showed that serum creatinine was 1.7 mg/dL, potassium was 5.5 mg/dL, and sodium was 139 mg/dL. The electrocardiogram demonstrated ST-segment elevation in leads V1-V4 and ST-segment depression in leads D2, D3, and aVF. The patient was treated with streptokinase via a peripheral vein. After streptokinase therapy, ST segments became normal in leads V1-V4 and her chest pain vanished. Approximately 24 hours after admission of streptokinase, the patient complained of severe left flank pain, back pain and thigh pain. Limitation of movement and paresthesia developed in the patient's left lower extremity. Complete blood count was repeated and hemoglobin decreased from 12 g/dL to 8 g/dL. As the patient had severe left flank pain and also decreasing hemoglobin drastically without any other focus of blood loss, abdominal computed tomography was performed which revealed a 7×3 cm retroperitoneal hematoma located anterior to the iliopsoas muscle (Figures 1 and 2).

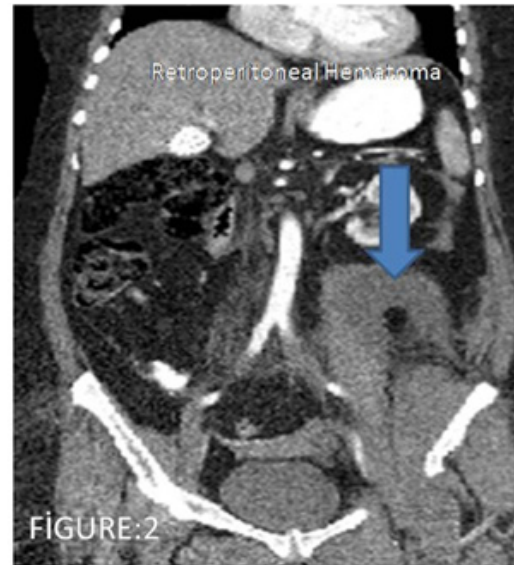
Figure 1: Monitoring with computed tomography of retroperitoneal hematoma



The patient had risk factors for bleeding such as advanced age and female gender. But the patient had no history of trauma, bleeding diathesis, use of anticoagulants, or invasive procedure (surgery, angiography). The patient was treated conservatively and was administered transfusion of 3 units of packed red blood cells. Her

hemoglobin level rose to 10 g/dL and remained stable until discharge. During abdominal ultrasonographic follow-ups, no increase in the size of the hematoma was reported. The patient remained clinically stable, and was discharged under the medical treatment.

Figures 2. Monitoring with computed tomography of retroperitoneal hematoma



Discussion and Conclusion

Trombolytic therapy has many complications. Hemorrhagic complications are the most common and potentially the most serious. Hemorrhage due to thrombolysis usually occurs at perivascular site and in the mucosal (gastrointestinal, urinary), dermal, or soft tissue (1). Intracranial hemorrhage is the most serious complication of thrombolytic therapy. Some unusual cases with spontaneous rectus muscle hematoma (5), intraperitoneal hematoma (6), and hematomas in retina, eye, and tongue. Retroperitoneal hematoma due to thrombolytic use is a rare complication. Usually, RPH is related to trauma, vascular lesions, surgical procedures, and use of anticoagulant agents. Occasionally, RPH may be idiopathic (7). In literature, RPH cases developing after anticoagulant (enoxaparin) therapy were described (3). Also, rectus muscle hematoma and RPH cases due to thrombolytic use were reported in literature (4, 5). Although it is difficult to predict how much effect heparin and acetyl salicylic acid administered along with streptokinase had on the development of the hemorrhage in the presented case, it is important to know that such complications may occur in patients receiving thrombolytic therapy. As is known, RPH is a condition that is usually followed-up by supportive therapy and needs surgical intervention rarely. In the present case, after blood transfusion and

withdrawing anticoagulant medications, the clinical manifestations improved evidently.

Retroperitoneal hematoma is a rare complication following streptokinase therapy for acute myocardial infarction. When a patient complains of abdominal pain following thrombolytic therapy, clinicians should consider bleeding into abdominal region.

Kaynaklar

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