



Acute Adrenal Hemorrhage in an Elderly Patient

Yaşlı bir Hastada Görülen Akut Adrenal Kanama

Demet Acar¹, Mustafa Gülpembe¹, Nazire Belgin Akıllı¹, Saniye Göknil Çalık¹, Ramazan Köylü¹, Yahya Kemal Günaydın¹, Türker Acar²

¹Department of Emergency Medicine, Konya Training and Research Hospital, Konya, Turkey

²Department of Radiology, Mevlana University, Konya, Turkey

ABSTRACT

Introduction: Adrenal hemorrhage is a relatively rare condition that is caused by trauma, stress, sepsis, adrenal tumors, anticoagulation, hemorrhagic disorders, and pregnancy. In acute adrenal hemorrhage, prompt diagnosis and treatment may be life-saving, because acute adrenal hemorrhage may result in acute adrenalin insufficiency and fluid–electrolyte imbalance.

Case Report: Herein we present the case of an elderly patient admitted to the emergency room with right shoulder pain that was diagnosed and treated for adrenal hematoma in a few hours.

Conclusion: Acute adrenal hemorrhage is quite rare and accurate diagnosis of this condition is extremely difficult. Clinicians should be aware of this rare condition and its management in order to accomplish prompt treatment.

Keywords: Acute adrenal hemorrhage, elderly, management

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ÖZET

Giriş: Adrenal kanama oldukça nadir görülmekle birlikte travma, stres, sepsis, adrenal tümör, antikoagulan ilaçlar, kanama bozuklukları ve gebelik gibi durumlara sekonder gelişebilir. Akut adrenal kanama adrenal yetmezliğe ve sıvı–elektrolit dengesizliğine yol açabileceğinden acil tanı ve tedavi hayat kurtarıcıdır.

Olgu Sunumu: Burada sağ omuz ağrısı şikayeti ile acil servise başvuran yaşlı bir hastada bir kaç saat içinde tanısı konan ve tedavisi gerçekleştirilen bir adrenal kanama sunulacaktır.

Sonuç: Akut adrenal kanama çok nadirdir ve tanısı da oldukça zordur. Klinisyenler, hızlı tanı ve tedavi için bu nadir hastalığı akılda tutmalıdır.

Anahtar Kelimeler: Akut adrenal kanama, yaşlı, tedavi

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Introduction

Adrenal hemorrhage is a relatively rare condition that is caused by trauma, stress, sepsis, adrenal tumors, anticoagulation, hemorrhagic disorders, and pregnancy (1). It is important to determine the etiology for appropriate treatment. Prompt diagnosis and treatment may be life-saving because acute adrenal hemorrhage may result in acute adrenalin insufficiency and fluid–electrolyte imbalance (2). Adrenal hemorrhage may lead to acute adrenal crisis, shock, and death if both glands are affected. The overall mortality rate of acute abdominal hemorrhage is reported to be as high as 15% (3).

Herein we present the case of an elderly patient admitted to the emergency room with right shoulder pain that was diagnosed and treated for adrenal hematoma in a few hours.

Case Report

A 74-year-old male was admitted to the emergency room with right shoulder and chest pain lasting for approximately 8 h. He had hypertension and was taking angiotensin-converting enzyme (ACE) inhibitors in combination with thiazide diuretics without any anticoagulant. On admission, his body temperature was 37.1°C, blood pressure was 240/140 mmHg, and pulse was regular with a rate of 80 beats/min. Physical examination did not reveal any remarkable finding. Complete blood count and biochemical tests were within the normal limits. Electrocardiography and blood cardiac markers including creatine kinase (CK)-MB, myoglobin, and Troponin I were normal. His blood pressure was controlled with iv glyceril trinitrate infusion. However,

Address for Correspondence/Yazışma Adresi:

Demet Acar, Department of Emergency Medicine, Konya Training and Research Hospital, Konya, Turkey.
Phone: +90 533 615 50 32 E-mail: dr_demetacar@hotmail.com

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his symptoms did not resolve with the control of blood pressure and im analgesic administration, and thoracic and upper abdominal computed tomography (CT) was ordered. Thoracic CT did not reveal any abnormality, but abdominal CT demonstrated a 6-cm lesion in the right adrenal gland. In addition, there was high-density fluid accumulation in the vicinity of this lesion, compatible with acute hemorrhage. Venography showed a partial defect in blood flow in the inferior vena cava proximal to the right renal vein, considered to be the pressure effect of the hematoma. Selective angiography of the right renal artery established an extravasation in the right surrenal artery originating from the superior branch of the right renal artery, and this artery was embolized with a particular embolizing agent. Control angiography demonstrated total embolization. The patient was subsequently hospitalized in the cardiovascular surgery department for follow-up.

The patient's informed consent was obtained before preparation of this report.

Discussion

Acute adrenal hemorrhage is quite rare and accurate diagnosis of this condition is extremely difficult owing to its non-specific presentations. The most common symptoms of adrenal hemorrhage at presentation include sudden abdominal, chest, flank, or back pain, nausea and vomiting, hypotension/shock, tachycardia, and fever (4). Anemia, hypotension, or even sudden death may also be the presenting symptoms (5).

The adrenal gland has a rich blood supply from the aorta by 3 arteries that divide into 50–60 branches, the capillary plexus of which drain into medullary sinusoids that form a single central adrenal vein. The pathogenesis of adrenal hemorrhage is multifactorial. Sepsis, disseminated intravascular coagulation, lupus anticoagulant and antiphospholipid antibodies, postoperative period, trauma, and anticoagulation are the main causes of adrenal hemorrhage. On the other hand, the incidence of spontaneous adrenal hemorrhage has been reported to be 0.14%–1.1% (6). Spontaneous adrenal hemorrhage is usually unilateral, involving the right gland, and it typically presents with sudden-onset abdominal or flank pain. In our case, no known etiological factors were present and the clinical course resembled that of spontaneous hemorrhage.

Some imaging modalities have been shown to be useful in differential diagnosis, and if there is a clinical suspicion of adrenal hemorrhage, advanced imaging techniques including CT should be ordered immediately. CT is highly sensitive and specific in the diagnosis of adrenal hemorrhage and it may be reveal adrenal hemorrhage as a non-homogenous mixed-density adrenal mass with extensive perirenal changes, a rapidly enlarging adrenal mass, or extensive retroperitoneal hemorrhage (7).

The adrenal gland classically has 3 arterial sources (superior, middle, and inferior adrenal arteries). A variety of indications exist for adrenal artery embolization, including palliative measures for oncological cases such as pain relief, reduction of tumor bulk, and

preoperative reduction of tumor vascularity. On the other hand, emergency embolization is indicated to preserve hemostasis in ruptured tumors, to suppress excess adrenal hormone production, to treat traumatic adrenal artery injury, and to occlude adrenal artery aneurysms (8). Similar to our case, embolization has been reported to be successful in many adrenal hemorrhage cases with different etiologies (9).

In the management of adrenal hemorrhage, supportive treatments, including volume resuscitation, preserving electrolyte balances, blood transfusion, and observation, are crucial (5, 10). Although surgery may be necessary in traumatic cases or cases of hemorrhage due to an underlying tumor, in cases of ongoing hemorrhage, embolization may be a life-saving measure (9).

Conclusion

Clinicians should be aware of adrenal hemorrhage and its management in order to accomplish prompt treatment of this rare condition.

Informed Consent: Written informed consent was obtained from the patient.

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