

Cinsel saldırı sonrası bir oktojenarda gelişen takotsubo kardiyomiyopatisi

Takotsubo cardiomyopathy after sexual abuse in an octogenarian

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ÖZET

Takotsubo kardiyomiyopatisi (TTC), koroner anjiyografide kritik koroner arter hastalığı olmadan sol ventrikül disfonksiyonu ve miyokard enfarktüsü bulgularının olduğu akut koroner sendrom gibi kardiyovasküler sendromdur. Bu hastalık genellikle duygusal stres, fiziksel ve ekonomik olaylardan sonra yaşlı ve postmenopozal kadınlarda görülür. Hastalar akut koroner sendromun çeşitli varyantları ile acil servise başvurur. Bu yazıda, cinsel istismar ve saldırıdan sonra dispne, göğüs ağrısı ve vücut travması ile acil servise başvuran 87 yaşında bir kadın olguyu tanımladık. Dolayısıyla bu vaka aynı zamanda adli ve psikiyatrik bir olgudur. Kardiyak kateterizasyonda koroner arterlerde kritik darlık gözlenmedi ve sol ventrikülde apikal balonlaşma gözlemlendi. TTC, birkaç gün içinde klinik ve laboratuvar değerlerinin iyileşmesi ile karakterizedir.

Anahtar Kelimeler: Takotsubo kardiyomiyopatisi, Cinsel travma, Apikal balonlaşma, Oktojenar.

ABSTRACT

Takotsubo cardiomyopathy (TTC) is a cardiovascular syndrome similar to acute coronary syndrome presenting with left ventricular dysfunction and myocardial infarction without critical coronary artery disease in coronary angiography. This disease is usually seen in elderly and postmenopausal women after emotional stress or physical or economic crises. Patients present to the emergency room with variants of acute coronary syndrome. In this article, we describe the case of an 87-year-old woman who applied to the emergency department with dyspnea, chest pain, and body trauma after sexual abuse and assault, so this case is also a forensic case. There was no critical stenosis in the cardiac catheterization and apical ballooning was observed in the left ventricle. TTC is characterized by improvement of clinical and laboratory values in a few days.

Keywords: Takotsubo cardiomyopathy, Sexual trauma, Apical ballooning, Octogenarian.

INTRODUCTION

Takotsubo cardiomyopathy, which was first described in Japan, is characterized by electrocardiogram (ECG) changes similar to acute myocardial infarction (ST segment elevation, negative T wave, etc.), transient dysfunction in the left ventricular apical and middle segments (1). This name is given because the balloon image detected in the left ventricular apical resembles a container used to catch the octopus called takotsubo (2). In TTC, along with apex and hypokinesia in the mid-

dle ventricle, the cardiac base is preserved and a characteristic abnormal ventricular wall motion pattern is observed. This syndrome is also called left ventricular apical ballooning syndrome, transient ventricular balloon syndrome, ampulla cardiomyopathy, stress-induced cardiomyopathy and broken heart syndrome. (3)

The pathophysiology of TTC, which often occurs in postmenopausal women, is unknown, but the role of catecholamines is thought to play. In addition, genetic factors are emphasized and it is suggest-

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ed that some people may have a genetic predisposition. It usually develops following an emotional (sudden death, disease report) or physical stress (such as an asthma attack, surgery) or an acute medical condition. Although it is generally asymptomatic, patients often present with symptoms such as chest pain, weakness, dyspnea and syncope. (4). The disease progresses with left ventricular dysfunction, and patients develop myocardial infarction without critical coronary lesions. Anteroapical ballooning and basal hypercontractility is observed in ventriculography and regional wall motion disorder is observed in echocardiography. Various mechanisms such as multivessel coronary vasospasm, endothelium and coronary microvascular dysfunction and direct catecholamine toxicity have been blamed for the occurrence of this syndrome (1). Medical support treatment is

usually used in the treatment of the disease, and most centers are treated like acute coronary syndrome. The pathophysiological aspects of the disease are still a matter of debate and a standard treatment consensus is lacking (5). The recovery prognosis of this syndrome is excellent. We present the uncommon octogenarian TTC following sexual abuse.

CASE

A 87 year-old-woman with hypertension and type 2 diabetes history after sexual assault presented to the emergency department complaining of facial ecchymosis, facial edema and chest pain. The patient was sexually assaulted by his neighbor at night. On general examination she was anxious,

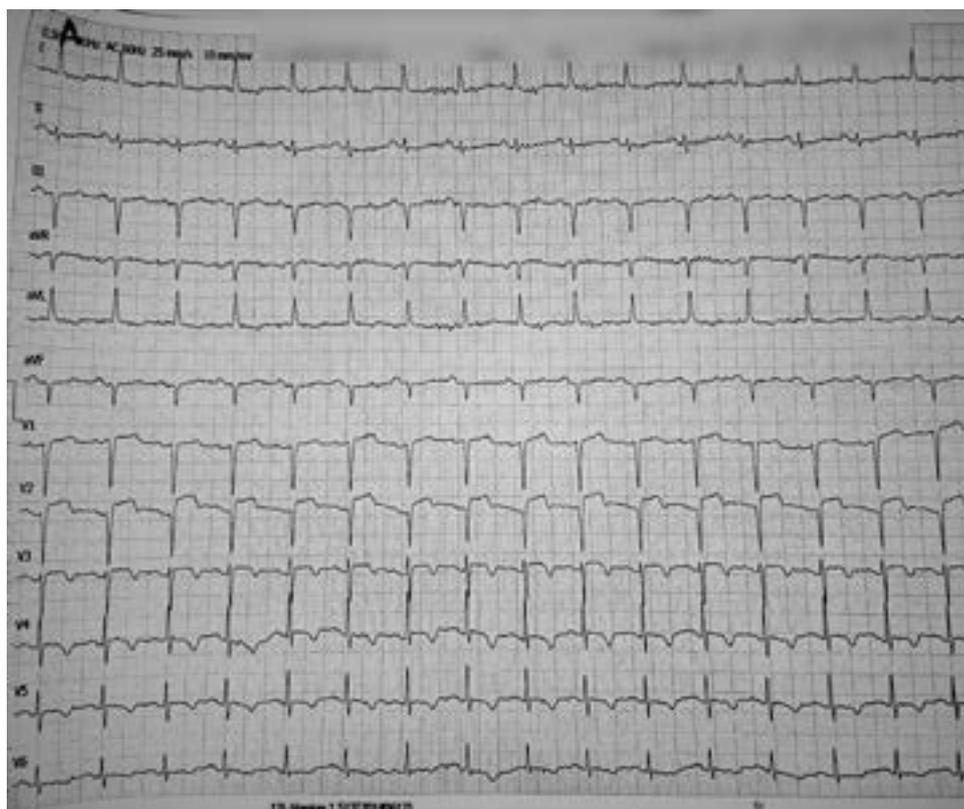


Figure 1: Electrocardiogram showing ST segment elevation V1-V4 and T-wave inversion from V4 to V6.

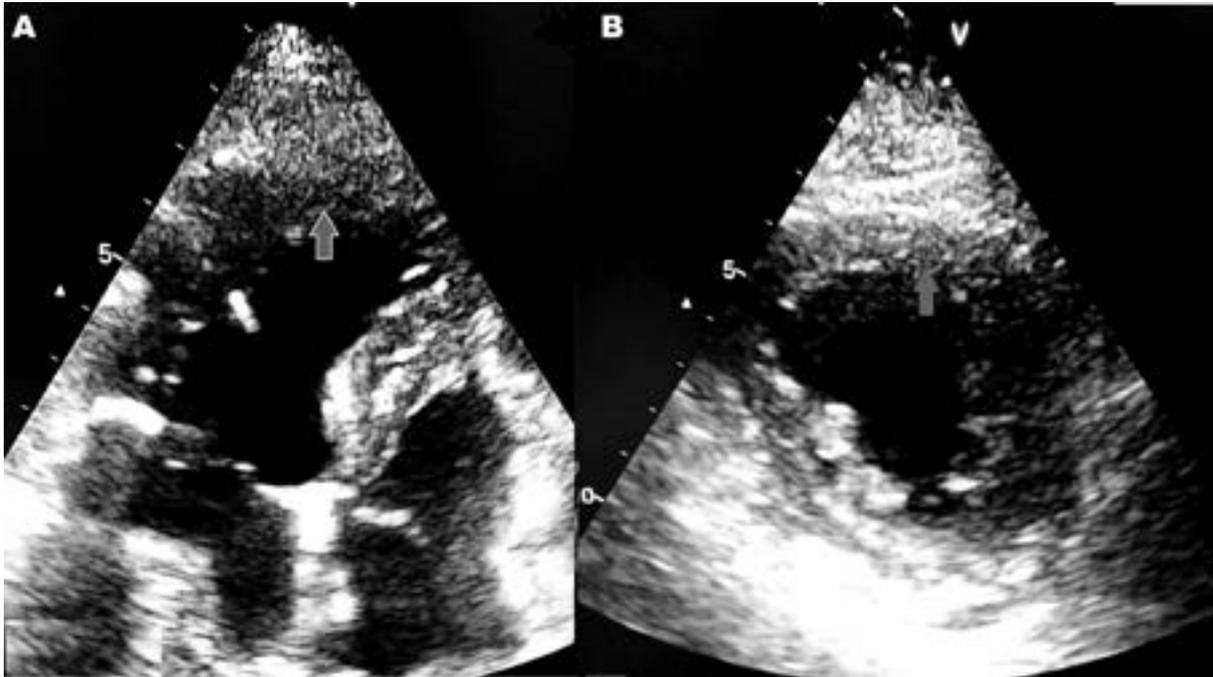


Figure 2: (A),(B) Echocardiography revealed hypokinesia in the apical and middle segments of the apex and left ventricle (red arrows), and was observed by preserving the basal segments

tachycardic with a heart rate of 110 beats/min and blood pressure of 150/90 mmHg. Electrocardiogram (ECG) was first taken at the application and there was a T-wave inversion from V4 to V6, with ST segment elevation in precordial leads from V1 to V4. After a while, dynamic ECG change was detected and ECG showed a deep and symmetrical T negativity from V1 to V6 (Figure 1). Echocardiography revealed hypokinesia in the apical and middle segments of the apex and left ventricle, and was observed by preserving the basal segments (Figure 2). The initial troponin I determination showed a value of 681 ng/L (reference :0-19 ng/L), which was above the 99th percentile upper reference limit. As a diagnosis, acute segment coronary syndrome with ST segment elevation was first considered and an invasive approach was applied and the patient was immediately taken to the coronary angiography laboratory.

Before angiography, the patient was taken to the coroner intensive care unit and fractional heparin (0.6 mL b.i.d), aspirin (300 mg / day), clopidogrel (300 mg / day), metoprolol, ramipril, diuretic (spironolactone 25 mg / day and furosemide 40 mg) were started. No obstructive lesions were observed in the coronary arteries during cardi-

ac catheterization. Ventriculography showed an atypical myocardial contraction pattern, evident hypokinesia in the mid-ventricular and apical segments; whereas ventricular movements in the basal segments were preserved (Figure 3). During follow-ups, troponin serum levels were decreased as 364 ng / L and 163 ng / L. Serum determination of the brain natriuretic peptide during hospitalization was 5033 pg / mL (normal values <125 pg / mL), creatinine levels were 0.81 mg / dL. Low-dose b-blockers, angiotensin converting enzyme inhibitor (ACE), and loop diuretics were applied. The patient's hemodynamia was seen as stable and there was no need to use positive inotrop. The following ECG recordings showed the progression from ST-segment elevation in all precordial leads to symmetrical T-wave inversion. Then the patient was consulted with psychiatry. The patient was evaluated as an acute stress disorder by psychiatry. Lorazepam 1 mg 1x1 and psychiatry polyclinic control recommended. Myocardial wall motion disorder recovered in control echocardiography performed one week later. The patient was discharged after 10 days and ramipril 5 mg, metoprolol 50 mg and acetyl salicylate 81 mg are prescribed. Written informed consent was obtained from the patient for publication.



Figure 3: (A) Left coronary artery without evidence of obstructive lesions, (B) Right coronary artery without evidence of obstructive lesion in any segment. (C) Ventriculography showing motion abnormalities of the left ventricle. Endocardial borders showing a pattern of apical ballooning (white arrows), impaired mid-ventricular contractility and normal motion of the basal segments.

DISCUSSION

The annual incidence of TTC is 1–2% of all troponin-positive acute coronary syndromes. This disease is mostly seen in elderly, postmenopausal women. Patients come to the clinic with many symptoms associated with acute coronary syndrome. Situations such as physical or emotional stress, death of a loved one, drugs, narcotics, confrontational arguments, financial crises occur before most cases of TTC (6).

There are still controversies about the causes, pathophysiology and treatment of this cardiac syndrome. Plasma catecholamine levels were found to be 2-3 times higher in patients with TTC compared to age and sex matched patients with acute myocardial infarction (7). The most accepted mechanism in the studies performed is that the increase in catecholamine can lead to cardiotoxicity and direct myocardial stunning. Other potential mechanisms seen in the literature; acute multi-vessel spasm, diffuse inflammation and limbic system activation and microvascular dysfunction (7,8).

Studies have shown that the conditions that cause Takotsubo cardiomyopathy may also occur as a

result after Takotsubo cardiomyopathy. Takotsubo cardiomyopathy has detrimental effects on both physical and psychological health. However, little is known about whether TTC also affects sexual functionality in female patients.(9)

Ninty percent occur in women, with an average age of onset 58–75 years and only 3% in women less than 50 years of age (10). Octogenarian cases in the literature are very rare. To the best of our knowledge, this is the first octogenarian TTC case after sexual abuse. Considering the age group and symptoms of our case, TTC was considered among the differential diagnoses and the diagnosis was supported by biochemical tests and imaging techniques

As a result, TTC; Stress is a clinical picture, also called cardiomyopathy, although it is clinically present with acute coronary syndrome symptoms(4), coronary artery disease is not detected, but severe disruption in ventricular function and apical ballooning is the most important feature of reversibility. In this article, this rare pathology was presented due to a case that we diagnosed and treated in order to keep it in mind.This case showed that TTC should be kept in mind in elderly female patients admitted to the emergency room after sexual traumas.

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