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Case Report

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Non-ST Elevation Acute Coronary Syndrome With Atypical Symptoms

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ABSTRACT

The main cause of death and poor prognosis after acute coronary syndrome (ACS) is the prevalence of long-term myocardial ischemia and necrosis. Early diagnosis and treatment of these patients can reduce morbidity and mortality from the most important factors of survival and rapid treatment. The most important barrier is delayed diagnosis of atypical symptoms. In this article, we present a phenomenon that is overlooked by atypical symptoms of non-ST-ACS.

Keywords: Acute disease, electrocardiography, myocardial ischemia, risk factors, syndrome

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INTRODUCTION

Ischemic heart disease is the leading cause of death. According to the World Health Organization ischemic heart disease is the most common cause of death at every gender in 2015.[1] According to Turkish Statistical Institute report of 2015, the leading cause of death is circulatory system by %40.3. Within the circulatory system related deaths, ischemic heart disease is the leading cause by %40.5.[2] It is stated death this situation will continue until 2020.[3]

The main reason for death and poor prognosis after acute coronary syndrome (ACS) is long-term myocardial ischemia and generality of necrosis. Early diagnosis and treatment of these patients are most important factors for survive and quick treatment can reduce morbidity and mortality.

The diagnosis of ACS is typical chest pain, significant changes of electrocardiogram (ECG) and elevation of biochemical markers of at least two cases. The most often admission reason of patients are chest pain. But sometimes patients come with atypical symptoms. Atypical symptoms are observed frequently in elderly patients (>75 age), women and people with diabetics, chronic renal disease or dementia.[4]

In this article, our purpose is to investigate Non ST elevation-ACS (NSTE-ACS) that is overlooked because of atypical symptoms, with a case.

CASE REPORT

A 61 year old man presented to the Emergency Family Physicians Green District Polyclinic Sisli Hamidiye Etfal Training and Research Hospital with coughing and shortness of breath. The coughing had persisted for three weeks. In the last week, as the coughing became more

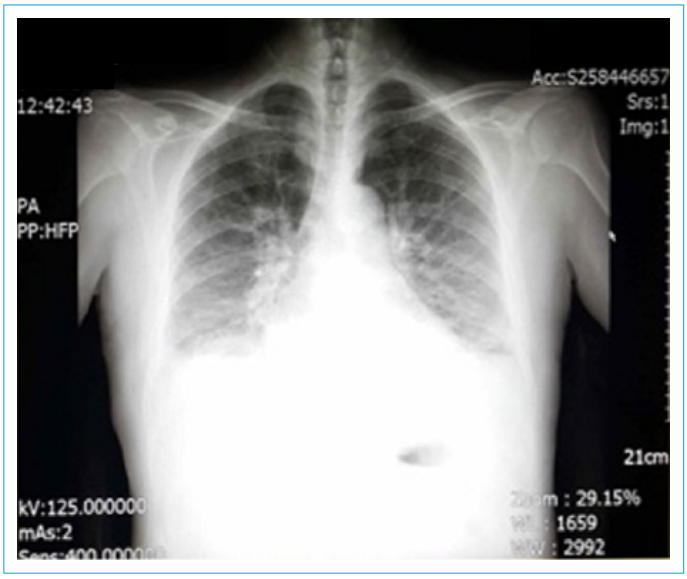

Figure 1. Chest X-ray.

prominent, breathing difficulties arose. He had no fever, sputum, chest, or back pain.

According to his medical history, he was diagnosed with hypertension five years ago but he specified that he did not regularly take medicine and need to rephrase "he stopped taking." Sometimes, he had hypertension problems. He has 40 packs/year smoking habit, and there was no surgical orallergic history.

Physical examination of patient revealed the following: temperature, 36.5°C; blood pressure, 140/90 mmHg; pulse, rhythmic and 85/min; light hyperemic oropharynx; no post nasal discharge; decreased respiratory sounds; and the left side was marked in the basal; there were no significant symptoms beside these in the respiratory system examination.

Chest X-ray was requested (Fig. 1). Based on chest X-ray results, left and right costa phrenic sinuses were closed and cardiothoracic ratio was increased. The patient was sent to the yellow area of emergency services for advanced examination.

The test results were as follows: the levels of troponin (0.641) and deep ST depression in V5, V6, and T negativity in ECG observations in the emergency services. The patient was referred to the cardiology department. The cardiologist detected ejection fraction (45%), aneurysm in the inferior basal wall, and advanced hypokinesis at the inferior middle and inferior septum on transthoracic echocardiography. The patient was sent to the coronary intensive care unit with the diagnosis of non-ST elevation-acute coronary syndromes.

DISCUSSION

Ischemic heart disease is the leading cause of death. According to the World Health Organization, ischemic heart disease is the most common cause of death in every sex in 2015.[1]

Coronary hearth diseases occur in two main forms in the clinic:

1. Chronic coronary heart disease (stable angina) and
2. ACS (unstable angina and acute myocardial infarction)[5]

ACS is treated with early diagnosis and treatment; emergency and deadly situation. ACS can be evaluated in three groups:

1. NSTE-ACS,
2. ST elevation-ACS (STE-ACS), and
3. unstable angina pectoris.

Chest pain, the leading cause of mortality that may be affected by delays or failure in diagnosis is the most important indicator of this table. According to a study that was published in 2004 with 2073 patients, chest pain is the main symptom in 63% patients and respiratory symptoms are secondary. Chest pain is decreasing in elderly patients and men are mostly admitted with chest pain rather than women.[6]

Chest pain can be evaluated in three groups: typical, atypical, and non-angina chest pain.

Typical pain involves all of the following three characteristics:

- Typical and in the optimal time uncomfortable feeling in the chest behind the sternum,

Table 1. Laboratuary results

Survey	Results	Unit	Reference values
Blood urea nitrogen	31.4	mg/dL	0–50
Creatinin	0.96	mg/dL	0–1.17
CRP	28.07	mg/dL	0–5
Glucose	132	mg/dL	82–115
Aspartate aminotransferase	29.0	U/L	0–40
Alanine aminotransferase	58.3	U/L	0–41
Troponin I	0.641	ng/mL	Normal <0.12 Gray zone 0.12–0.6 High >0.6

- Triggered with exercise and emotional stress, and
- Relief with rest and nitrates within minutes.

Atypical pain has two of these features. Non-angina chest pain has only one of these features.[7]

Especially in elderly patients, diagnoses may be delayed due to nonspecific symptoms. The respiratory system symptoms take the place of chest pain; due to decreased pain sensitivity in elderly people, chest pain may not be clearly noted and this may cause a delay in recognition and treatment of the disease.[8,9] Our patient was diagnosed owing to careful physical examination and accurate assessment of symptoms with chest X-ray despite coughing and respiratory disorder that are stated as the main problem with lack of chest pain. Patient was sent to yellow area of emergency services because of bilateral effusion and cardiothoracic ratio of >0.5. The treatment was started on time due to cardiovascular consultation and accurate observation. ACS may not always exhibit abnormal ECG findings. Normal or semi-normal ECG observations may cause difficulties in diagnosis and treatment. ECG and enzyme assays which are performed several times may delay the diagnosis and treatment for such patients.

Our patient's NSTE-ACS diagnosis was made with clinical evidence such as levels of troponin and lack of ST depression in ECG (Table 1).

According to the hospital records, NSTE-ACS is more common than STE-ACS.[10] Patients with STE-ACS exhibit higher rate of in-hospital mortality than those with NSTE-ACS. [11] Different patient profiles may be result from this at the same time as these older patients have more comorbidities (such as diabetes and kidney failure). According to a study published in 2005, the number of derivation with ST depression at NSTE-ACS patients is detected as a predictor for deaths in the first month.[12]

Atypical symptoms are the reason for difficulties in diagnosing ACS. Therefore, we have to protect patients from ACS before starting. Because the risk of cardiovascular diseases may be prevented by changing strategy about smoking, unhealthy diet, obesity, physical immobility, and alcohol.[13] Our patient's risk factors were age, sex, smoking, and uncontrolled hypertension.

CONCLUSION

Family physicians and the specialists have an important duty of protecting patients from the cardiovascular diseases. They have to determine the risk factors and help patients to manage those factors. In this manner, cardiovascular mortality may be decreased.

Disclosures

Informed Consent: Written informed consent was obtained from the patient for the publication of the case report and the accompanying images.

Conflict of Interest: None

Peer-review: Externally peer-reviewed.

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