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Case Report

Paraganglioma masquerading as acute myocardial infarction and cardiogenic shock

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ABSTRACT

Paragangliomas, extra-adrenal pheochromocytomas, are rare catecholamine-secreting tumor. A 34-year-old lady admitted with diagnosis of ST elevation acute myocardial infarction with cardiogenic shock. Left ventricular function, severely depressed, returned to normal after initial stabilization. Coronary angiogram was normal. A para-aortic paraganglioma was diagnosed during the patient's work-up with biochemical studies, computed tomography of abdomen and functional radioisotopes imaging and was eventually surgically resected.

This case shows that acute myocardial infarction may be the initial manifestation of these neuroendocrine tumors. Hypertensive emergency, much less elevated blood pressure may not be present at time of presentation.

1. Introduction

Paraganglioma is a rare catecholamine-secreting tumor that arises in the sympathetic or parasympathetic nervous system and usually presents with benign manifestations, whose typical clinical presentation includes the triad of headache, palpitations, and diaphoresis. However, a wide range of signs and symptoms may be present, including a variety of life-threatening cardiovascular syndromes, such as hypertensive crisis, shock or profound hypotension, acute heart failure, acute myocardial infarction (AMI), arrhythmia, cardiomyopathy, myocarditis, dissection of an aortic aneurysm, and acute peripheral ischemia.[1] Failure to identify a paraganglioma in these situations may be fatal.

We describe a challenging diagnosis of paraganglioma with many cardiovascular manifestations, which could have been missed due to the absence of typical symptoms.

2. Case report

A 34-year-old woman was transferred to our tertiary care hospital from a local hospital with complaints of retrosternal

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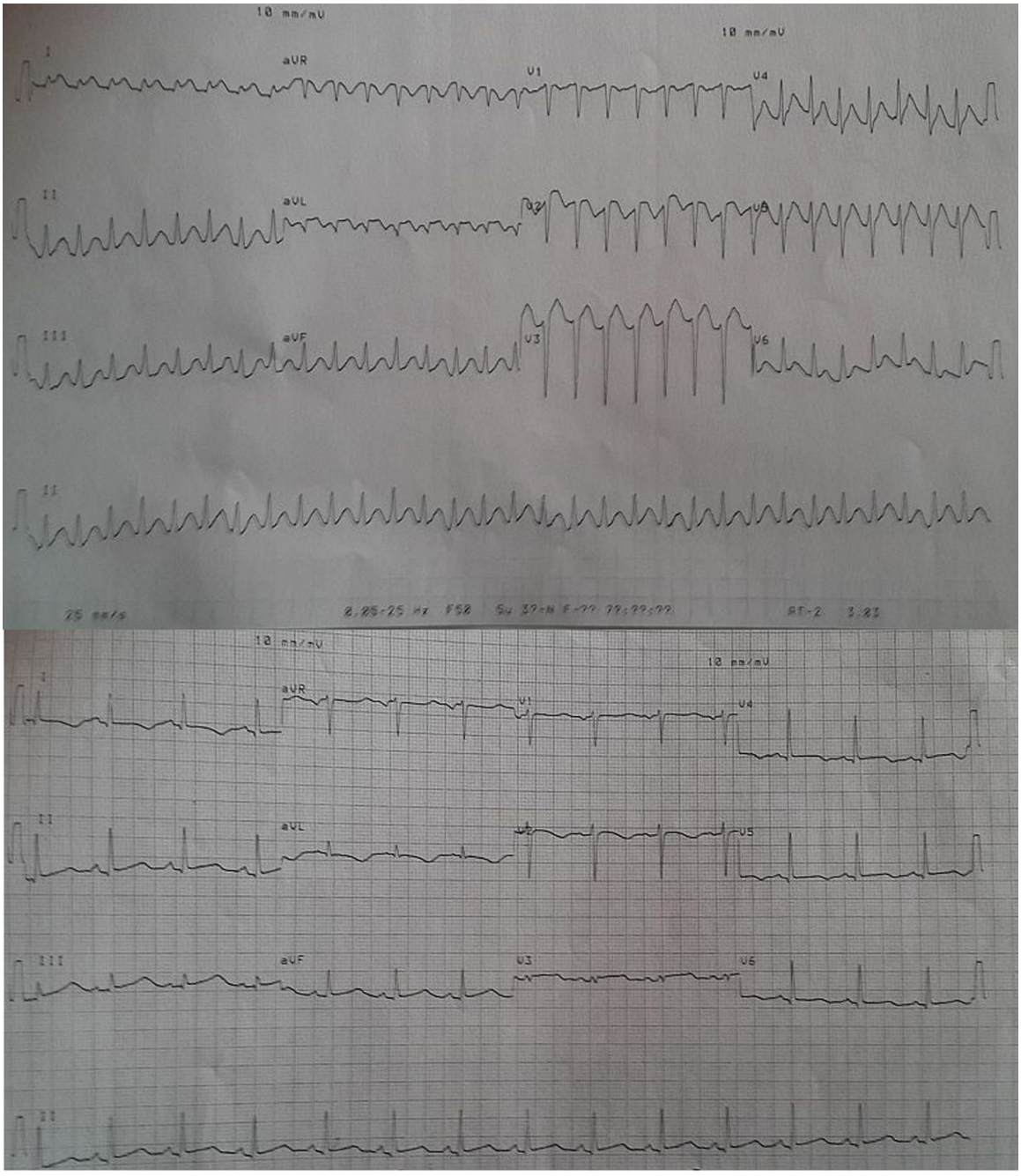

Fig. 1 – Pictures of ECGs: (A) at admission and (B) after 2 days.

chest pain, diffuse sweating, shortness of breath, nausea, and vomiting since morning.

On arrival in Emergency Department, she was found to be in cardiogenic shock, severe lactic acidosis with pulmonary edema requiring intubation, assisted ventilation, and inotropic support. On examination, she was severely dyspnoeic with sinus tachycardia and hypotension. Electrocardiogram (ECG) revealed ST-segment elevation in anterolateral leads (Fig. 1A) and strongly positive cardiac enzymes. Her serum creatinine level was 1.9 mg/dL. 2D-Echocardiogram (ECHO) showed global hypokinesia and severe left ventricle dysfunction with ejection fraction of 30%.

An Initial diagnosis of STEMI (ST-segment elevation myocardial infarction) with cardiogenic shock was made and an emergency coronary angiogram was performed. This showed widely patent coronary arteries (Fig. 2).

She was kept on ventilator support for next 2 days. Her ST-changes became normal on ECG (Fig. 1B). Review 2D-echo revealed LV function improved spontaneously to mild dysfunction with EF 55% and no regional wall motion

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