
Hormonal Mechanisms

6.7 A Case of Left Ventricular Ballooning 'Takotsubo Syndrome' Associated with Pheochromocytoma

D. Cotesta (1), C. Letizia (1), L. Petramala (1), A. Verrienti (2), S. Filetti (2), S. Volpe (3), C. Greco (3)

(1)Day Hospital di Medicina Interna e dell' Ipertensione Arteriosa, Università degli Studi di Roma "La Sapienza", Roma; (2)Cattedra di Medicina Interna del Dipartimento di Scienze Cliniche Università degli Studi di Roma "La Sapienza", Roma; (3)Cardiologia, Università degli Studi di Roma "La Sapienza", Roma, Italy

Introduction. 'Left ventricular ballooning' or 'tako-tsubo' cardiomyopathy or 'tako-tsubo syndrome' is a particular condition characterized by a typical morphological aspect during coronary artery angiography, this is a transitory alteration of contractile pattern of the apex of left ventricle and it is induced by stress. In medical literature, some cases of association of tako-tsubo syndrome with pheochromocytoma are reported.

Discussion. We report a case of a 72-year-old woman referred to our department of emergency for chest pain associated with paroxysmal elevation of blood pressure, EKG revealed an ST alteration in specific ECG leads (DIII, AVF, V1) with elevation of troponin. An echocardiogram showed a reduction of contractile action of left ventricle (ejection fraction 40%) with an akinesia of apex and antero-lateral wall of left ventricle. A coronary artery angiography didn't show luminal stenosis of the arteries while left ventricular angiography showed medio-apical akinesia involving antero-lateral wall with an exalted contractility of the basal portion of left ventricle. In the following days the patient presented paroxysmal attacks associated with dizziness and a 24 h urine collection of metanephrine and VMA revealed high levels of both. A MRI of abdomen showed the presence of a mass of left adrenal gland of 32 mm. The patient underwent the surgical resection via laparotomic approach of the gland with a previous preparation with alpha-blockers. Genetic analysis didn't show any mutations of susceptibility gene for pheochromocytoma (RET, VHL, NF1, SHDB/D). During the follow up the patient was asymptomatic for chest pain and blood pressure came back to normal range.

Conclusions. In the described case of pheochromocytoma, tako-tsubo syndrome could be caused by a direct damage of catecholamine on the myocytes.