**DETERMINANTS OF CARDIAC DYSFUNCTION AND LEFT VENTRICULAR HYPERTROPHY IN PHEOCHROMOCYTOMA**

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*Background*. Pheochromocytomas (PHEO) are chromaffin cell tumors most frequently originating in adrenal medulla. Left ventricular (LV) dysfunction, similar to stress (takotsubo) cardiomyopathy has been reported in PHEO possibly related to episodic rise in circulating catecholamine concentration. The aim of this study was to identify potential predictors of LV dysfunction in histologically verified PHEO.

*Methods*. We reviewed demographic and clinical characteristics, as well as electrocardiographic (ECG) and echocardiographic (ECHO) findings in a series of 18 adults with histologically verified diagnosis of PHEO between 1999 and 2014 (mean age 54±19 years, 61% females).

*Results*. Most tumors (78%) were identified incidentally while 22% were discovered during work up for resistant hypertension or labile blood pressure. ECHO was performed in 12 patients prior to adrenalectomy and showed at least mild LV hypertrophy (LVH) in 7 (including 2 with severe LVH and dynamic LV outflow tract obstruction) and LV systolic dysfunction in the absence of epicardial coronary artery disease in 3 (LV ejection fraction 25±9%). ECG was less sensitive in identifying LVH (2/7). There was a trend in reduction of total 12-lead QRS voltage following surgical tumor removal (131±35 vs 113±20, p=0.07). QT prolongation without ventricular arrhythmia was noted in 5 patients. Age, sex, clinical characteristics, and urinary catecholamine excretion did not predict presence of cardiomyopathy while plasma nor-metanephrine was significantly higher in those with LVH (3242±1873 vs 329±372 pg/ml, p=0.02).

*Conclusion*. LV systolic dysfunction similar to stress (takotsubo) cardiomyopathy occurs frequently in PHEO and cannot be predicted by demographic and clinical characteristics or by random measurement of circulating or urinary concentration of catecholamines. Acute elevations of circulating catecholamines during PHEO crises may be responsible for LV dysfunction.