

Correlation between The Level Of Metanephrines and The Size of Pheochromocytoma

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About the Study

Pheochromocytomas are rare neuroendocrine catecholamine-producing tumors that arise from either the adrenal medulla (PHEO) or extra-adrenal paraganglionic tissues (paraganglioma/PGLs). PHEO is responsible for about 0.01-0.1% of the cases of hypertension. Assessment of the plasma/urinary levels of metanephrines (catecholamines metabolites) is now considered the gold standard for the diagnosis of PHEOs.

In this study, we aimed to investigate the role of the plasma and 24-hour urinary metanephrines levels in the diagnosis of PHEO/PGLs. Retrospective review of 25 patients diagnosed with PHEO/PGLs. We measured the plasma and 24-h urinary levels of metanephrines and normetanephrines. The data were compared with another set of 25 patients with other adrenal

pathologies. The correlation coefficient between the tumor sizes and the plasma/24-hour urinary metanephrines levels was calculated.

The mean tumor size was 4.63cm. The sensitivity and specificity rates for plasma metanephrines were (80-92%) and (92-96%), respectively, while for 24-hour urinary metanephrines were (80-90%) and (95-100%), respectively. We found a strong positive relationship between the tumor size and the plasma levels of normetanephrine ($r = 0.518$, $P < 0.01$), and metanephrine ($r = 0.577$, $P < 0.01$). While the relation with the 24h urinary concentrations of normetanephrine ($r = 0.384$, $P = 0.01$) and 24-hour urinary metanephrine ($r = 0.138$, $P < 0.01$).

Biography:

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