

### **Retroperitoneal Functioning Paraganglioma - A Rare Case of Secondary Diabetes**

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#### **Abstract**

*Introduction:* Paragangliomas are rare neuroendocrine tumors that arise from the extra-adrenal autonomic paraganglia, which can derive from either parasympathetic or sympathetic paraganglia and are closely related to pheochromocytomas.

*Case report:* We present the case of a young male patient of 37 years old, who was admitted for hypertensive crisis and palpitations. His medical history included medically controlled type 2 diabetes mellitus, (diagnosed 10 months ago), Hepatitis A. Hormonal evaluation revealed elevated urinary metanephrines and normetanephrines, with mainly increased normeta-nephrines (2330 ug/24h). Plasmatic metanephrins were in normal range, but levels of plasmatic normetanephrins were elevated (952 pg/ml). The assessment of pituitary and aldosterone-renin axis values were within normal limits. Abdominal computed tomography showed left adrenal nodular lesion on the external arm, bilobulated, size 32/33 mm with maximum axial and cranio-caudal diameter of approx. 45 mm, suggestive of a benign lesion, keeping the cleavage plane to vecinatate structures. Left adrenalectomy was performed by laparoscopic approach. We mention that immediately after induction of anesthesia were recorded blood pressures of 298/143 mmHg. Histopathologic and immunohistochemical examination diagnose paraganglioma, without invasion of adjacent tissues. The patient evolution was favorable, with the remission of the symptoms and normalization of hormonal markers. It is imperative to note the remission of diabetes in the postoperative period.

*Discussion:* This is the case of a young patient with functional retroperitoneal paraganglioma, who presented with symptoms of pheochromocytoma. Compared to pheochromocytomas, paragangliomas are rarely symptomatic and functional. Association with diabetes is even more rare. Specialized investigations allowed the proper diagnosis and the therapeutic approach above was the result of a multidisciplinary cooperation.

**Key words:** paraganglioma, pheochromocytoma, adrenalectomy, normetanephrines