

# Endosonography –

## – an important diagnostic tool in identifying a small aldosterone-producing adenoma in a patient with primary hyperaldosteronism – case report –

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### Introduction:

Primary hyperaldosteronism is still an underdiagnosed cause of hypertension. The challenge lies however, not only in diagnosing the primary hyperaldosteronism, but also in the distinction between aldosterone-producing adenoma (APA) and idiopathic adrenal hyperplasia (IHA). Establishing the correct diagnosis is after all essential, because surgery is only effective in patients with adrenal adenoma.

### Case report:

We report about a 67-year-old patient, who presented with hypertensive crisis with blood pressure up to 250/120 mmHg and intermittent hypokalemia below 2.8 mmol/l. Pheochromocytoma and Cushing syndrome have been excluded. The routine laboratory tests displayed however an elevated plasma aldosterone/renin quotient as well as an elevated 24-h urinary excretion of aldosterone. At this point the patient was being treated with five antihypertensive drugs and the blood pressure was still indicating levels over 200/100 mmHg. It was therefore not possible to discontinue the interfering antihypertensive therapy in order to conduct further diagnostics. Both CT and MRI detected no abnormalities or adrenal adenoma. The endosonographic examination of the adrenal glands identified however an unilateral 8 x 6 mm small adrenal adenoma, which exhibited the typical morphological signs of an APA. The patient underwent surgery. After resection of the small adrenal adenoma, the aldosterone/renin quotient become normal and the patient presented a stable blood pressure below 135/70 mmHg.

<b>Symptoms</b>	<ul style="list-style-type: none"> <li>hypertensive crisis with systolic blood pressure up to 250/120 mmHg</li> </ul>
<b>Medication</b>	<ul style="list-style-type: none"> <li>bisoprolol 10 mg, lisinopril 20 mg, hydrochlorothiazide 12,5 mg, moxonidine 0,8 mg, lercanidipine 20 mg</li> </ul>
<b>Laboratory parameter</b>	<ul style="list-style-type: none"> <li>intermittent hypokalemia below 2.8 mmol/l</li> <li>aldosterone: 26.4 ng/dl, (5 - 15); renin: 2.5 pg/ml, (0,1 - 16,1);</li> <li>aldosterone/renin quotient: 11, ( - 5);</li> <li>normal 24-hour urine catecholamines, normal 24-hour cortisol, normal dexamethasone test</li> </ul>
<b>Imaging Diagnostics</b>	<ul style="list-style-type: none"> <li>Abdominal sonography, abdominal CT and MRI: no abnormalities or adrenal adenoma</li> <li>Endosonography: 8 x 6 mm small adrenal adenoma in the proximal corpus of the left adrenal gland</li> </ul> 
<b>Therapy</b>	<ul style="list-style-type: none"> <li>Robot-assisted (da Vinci) laparoscopic near- total adrenalectomy left</li> </ul>

### Discussion:

This case indicates that in the differential diagnosis of primary hyperaldosteronism, endosonography is more important than previously assumed in the literature. Especially in difficult cases, the use of endosonographic examination should be considered.

