

**Title: Benign co-secreting unilateral adrenal adenoma - An electrolyte potpourri: A Case Report**

**Author(s): Bhavya Sharma**

**Affiliation:** Northeast Ohio Medical University

**Abstract**

**Introduction:** Adrenal adenomas are relatively common benign masses that are most often inactive in hormone secretion. These tumors do not ordinarily cause symptoms and are regularly incidental findings on imaging. We introduce a common yet complex manifestation of an adrenal adenoma.

**Methods:** Case report of a middle-aged patient in which we identify common symptoms, workup, management, and clinical pearls in diagnosing and treating adrenal adenomas.

**Results:** A 56-year-old woman with a five-year history of hypertension, recently diagnosed with diabetes mellitus was admitted for acute decompensated heart failure (ADHF) with preserved ejection fraction of 64%. Significant history included uncontrolled hypertension despite multiple anti-hypertensive medications. She was found to have profound hypokalemia despite supplement of 80 (mEq/day). She has a history of frequent admission for ADHF due to hypertensive crisis. Nephrology was consulted for hypokalemia and uncontrolled hypertension (190/100 mmhg). Trans tubular potassium gradient (TTKG) was assessed to evaluate excess mineralocorticoid bioactivity in the distal nephron. Serum aldosterone concentration was higher than normal with low plasma renin activity (PRA), while on lisinopril. Early morning serum cortisol was found to be 14 µg/dl. Abdominal CT scan displayed a right adrenal nodule with calcification (4.6cm). To address the resistant hypertension, spironolactone 50mg twice daily was used with marked improvement in blood pressure and hyperkalemia.

**Discussion:** Benign adrenal adenomas can co-excrete excess aldosterone and cortisol, which can change clinical management. It is important to recognize co-secreting adrenal adenomas and be watchful for new onset hypertension and insulin resistance.