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### A case of dual hormone secreting adrenal adenoma

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We describe a case of a 70 year old man who was diagnosed with an incidental adrenal adenoma. He had presented to the accident and emergency with a history of abdominal pain in June 2007. He had a CT scan of his abdomen which revealed a 1.9 cm well circumscribed rounded lesion at the medial aspect of the right adrenal gland. It had Hounsfield units of minus 10 to minus 5 and was therefore consistent with a right sided adrenal adenoma. On examination he did not have any features on Cushing's syndrome and his serum electrolytes were normal.

His past medical history included type 2 diabetes, hypertension and chronic kidney disease (eGFR 50). His medications at the time of first endocrine review were atenolol, doxazosin, frusemide, spironolactone, lisinopril, nifedipine, insulin glargine, metformin and aspirin. It was arranged for him to have 24 hour urine collection for catecholamines, overnight dexamethasone suppression test and an aldosterone/renin ratio. His medications were stopped for the test.

His urinary catecholamines were normal, aldosterone/renin ratio was 1300 and serum cortisol after 2 mg dexamethasone suppression was 65 nmol/L. This suggests that he had inadequate cortisol suppression and a high aldosterone/renin ratio suggesting hyperaldosteronism. This indicated that he had concurrent secretion of aldosterone and cortisol from his adrenal adenoma.

**Discussion** - Adenomas which cosecrete aldosterone and cortisol are rare. Clinically patients with such lesions have biochemical evidence of hyperaldosteronism with no features of cortisol excess. Aldosterone secreting adenomas are usually small 1.6 -1.8 cm as compared to cortisol secreting adenomas which are usually > 2 cm. Usually when size of tumour is large for an aldosterone secreting adenoma concomitant cortisol secretion should be suspected.

#### References -

1. Combined Conn's and Cushing's syndrome: an unusual presentation of adrenal adenoma. Baert D, Nobels F, Van Crombrugge P. *Acta Clin Belg* 1995;50(5):310-3.
2. A case of aldosterone-producing adrenocortical adenoma associated with a probable post-operative adrenal crisis: histopathological analyses of the adrenal gland. Sugawara A, Takeuchi K, Suzuki T, Itoi K, Sasano H, Ito S. *Hypertens Res*. 2003 Aug;26(8):663-8.

