

A case of severe hypoaldosteronism following unilateral adrenalectomy for Conn's Syndrome

Alistair Connell, Mark Cohen
Barnet and Chase Farm Hospitals NHS Trust

Introduction

A 58 year old female presented with a history of resistant hypertension and hypokalaemia, with normal renal function. Investigations confirmed primary hyperaldosteronism that was not suppressed following a standard saline infusion test. CT scanning revealed a 1.3cm right-sided adrenal mass (fig.1).

Adrenal vein sampling confirmed right-sided unilateral hypersecretion of aldosterone; she underwent an uneventful right adrenalectomy, following which her BP was controlled on atenolol alone (fig. 2).

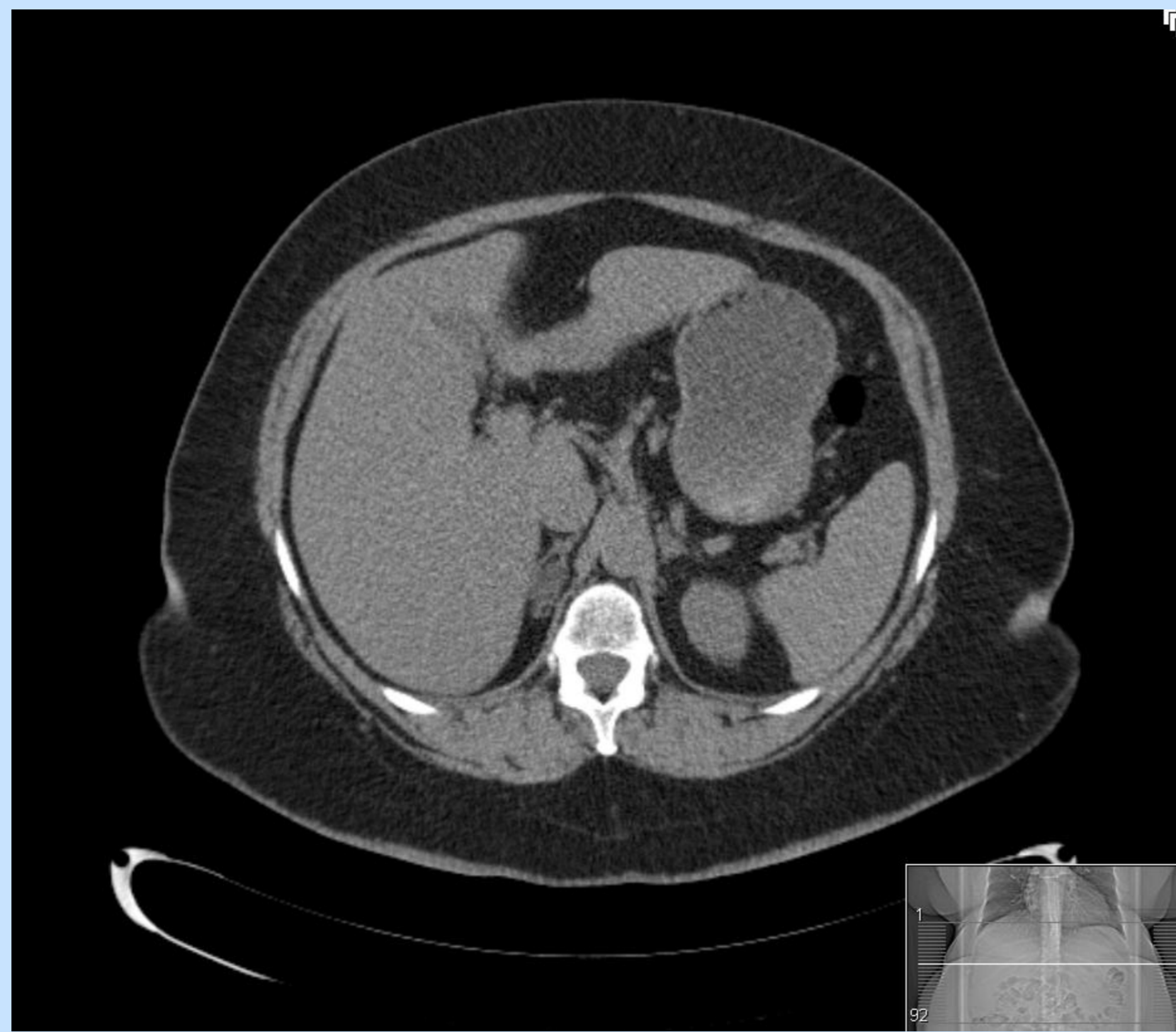


Fig.1- Unilateral adrenal adenoma

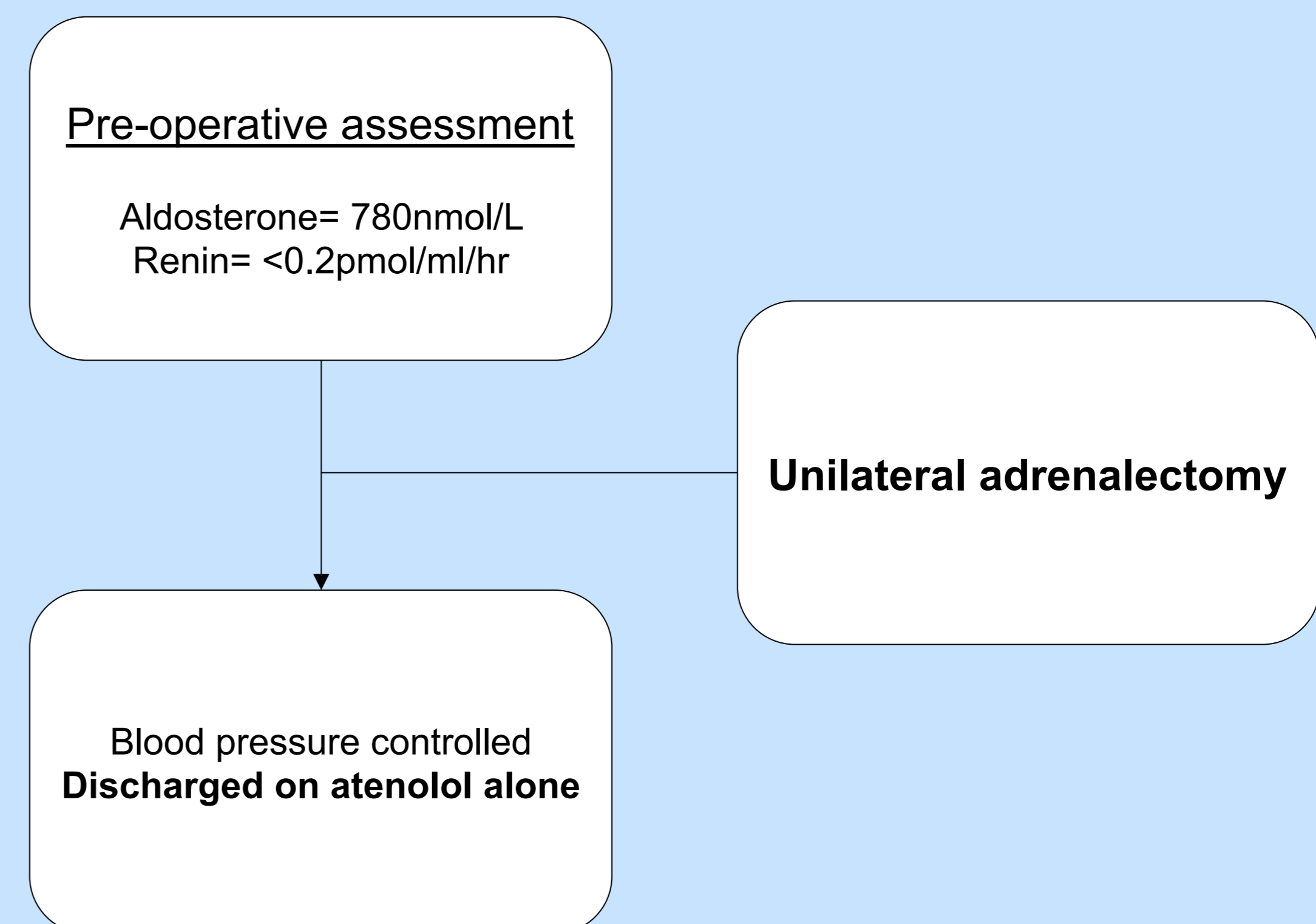


Fig.2- Perioperative management

Postoperative presentations

9 months after her adrenalectomy, the patient presented to Barnet Hospital with a variety of biochemical abnormalities consistent with hypoaldosteronism (fig. 3). These normalized following mineralocorticoid replacement. An attempt to reduce fludrocortisone dose in an outpatient setting resulted in a further reversible recurrence of both hyperkalaemia and acute kidney injury (fig. 4).

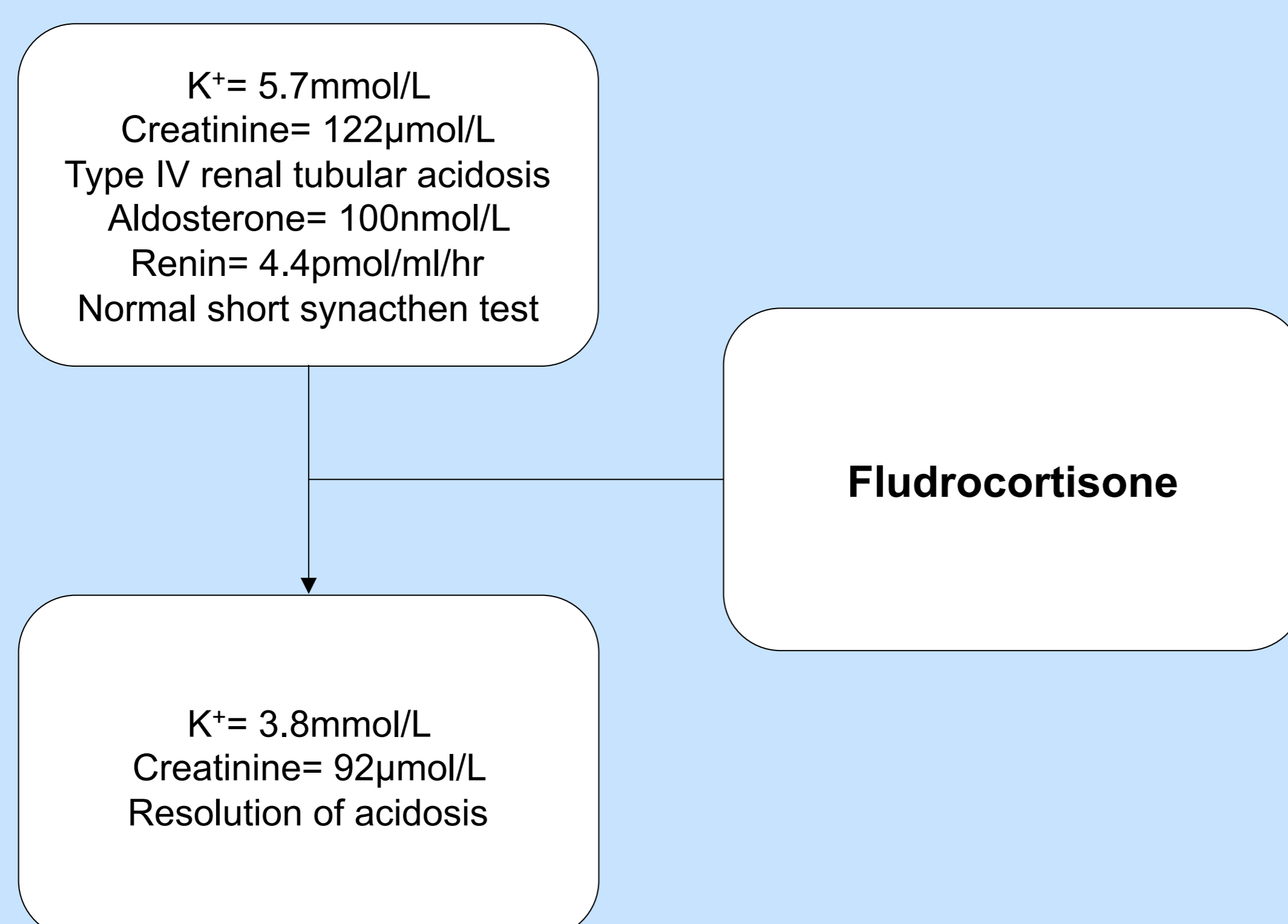


Fig. 3- Postoperative hypoaldosteronism

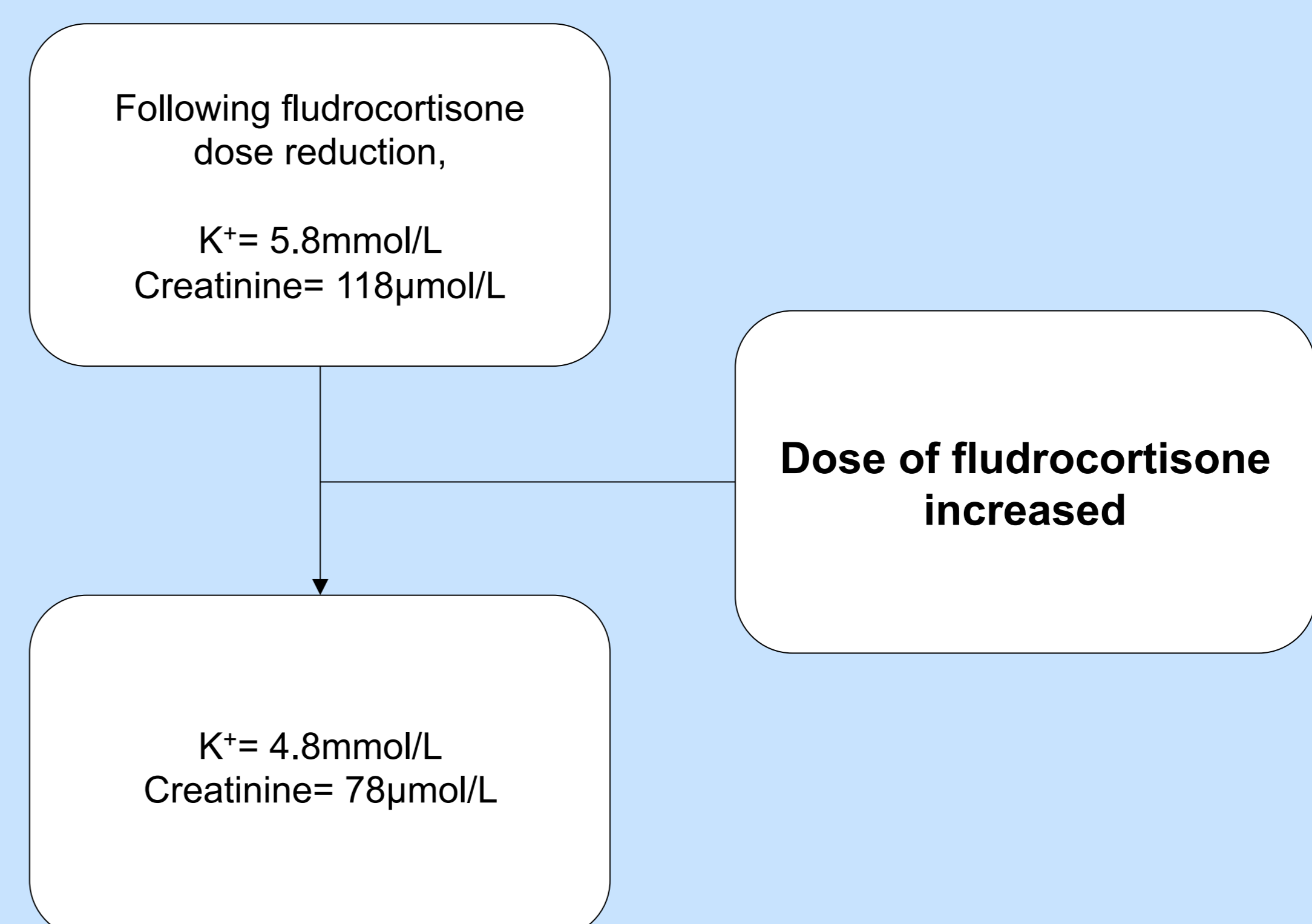


Fig. 4- Effects of altering mineralocorticoid replacement dose

Conclusions

- Post-operative hypoaldosteronism is well documented in cases of unilateral adrenalectomy for aldosterone-producing adenomas.
- This may relate to a decrease in adrenal mass, or a transient suppression of the contralateral gland.
- However, it is rare for this to be prolonged, or severe. This may occur in up to 5% of cases, and responds to mineralocorticoid treatment. Our case illustrates the importance of follow-up in the post-operative period.
- **β-blockade may have prevented adequate recovery of the patient's renin-aldosterone axis. Her atenolol has been now changed to amlodipine, and she awaits further follow up.**