Adrenal haematoma as a complication of adrenal vein sampling

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DESCRIPTION

A 48-year-old man with poorly controlled hypertension presented with a 1-day history of several episodes of epistaxis. The patient had a blood pressure of 190/100 mm Hg. Initial laboratory studies revealed mild acute renal insufficiency, hypokalaemia and metabolic alkalosis.

Diagnostic studies were performed for secondary causes of hypertension. Plasma metanephrine levels were within normal limits. Plasma aldosterone (40 ng/dl) to plasma renin (0.12 ng/ml/h) ratio was markedly elevated, which was suggestive of primary aldosteronism. Enhanced CT scan of the abdomen showed a left adrenal gland nodule with a normal appearing right adrenal gland. Adrenal vein sampling was performed to confirm the presence of a unilateral aldosterone-secreting tumour for possible unilateral adrenalectomy. Both adrenal veins were successfully sampled. Before the procedure was

complete, the patient reported an acute onset of moderate right-sided chest pain.

The procedure was terminated. A 12-lead ECG revealed normal sinus rhythm and serial troponins were negative. A CT scan of the abdomen revealed a 3 cm smooth ovoid dense mass at the site of the right adrenal gland consistent with an adrenal haematoma (figure 1). The patient symptomatically improved with analgesics, intravenous fluids, and did not need any surgical intervention. Blood pressure control was achieved with spironolactone, nifedipine and labetalol (figure 1).

Adrenal vein sampling is the gold standard for localising aldosterone-secreting tumours for possible adrenalectomy.¹ Complications include failure of canalisation of the right adrenal vein, haematoma, infarction, adrenal vein thrombosis and perforation.² Adrenal haematoma is an uncommon complication and may be associated with acute chest pain during or shortly after the procedure.

Figure 1 A non-enhanced CT scan of the abdomen showing a 3 cm right adrenal haematoma (arrow).

Learning points

- ▶ Adrenal haematoma is a known complication of adrenal vein sampling.
- ▶ Adrenal haematoma should be considered in a patient presenting with acute chest pain during or shortly after the procedure.
- ▶ Diagnosis of adrenal haematoma is made through non-enhanced CT scan of the abdomen.

Competing interests None.

Patient consent Obtained.

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REFERENCES

- 1 Kahn SL, Angle JF. Adrenal vein sampling. *Attach Vasc Interv Radiol* 2010;13:110–25.
- 2 Gross MD, Falke THM, Shapiro B, et al. *Adrenal glands*. In: Endocrine imaging. Norwalk, CT: Appleton & Lange, 1992;271:349.

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