

Cushing's Disease Detected Following an Adrenal Incidentaloma

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Case:

- 63 year old ♀
- Referred to Gastroenterology for change in bowel habit
- CT colonogram performed - bulky left adrenal
- Referred to Endocrinology
- Seen in the nurse led incidentaloma clinic

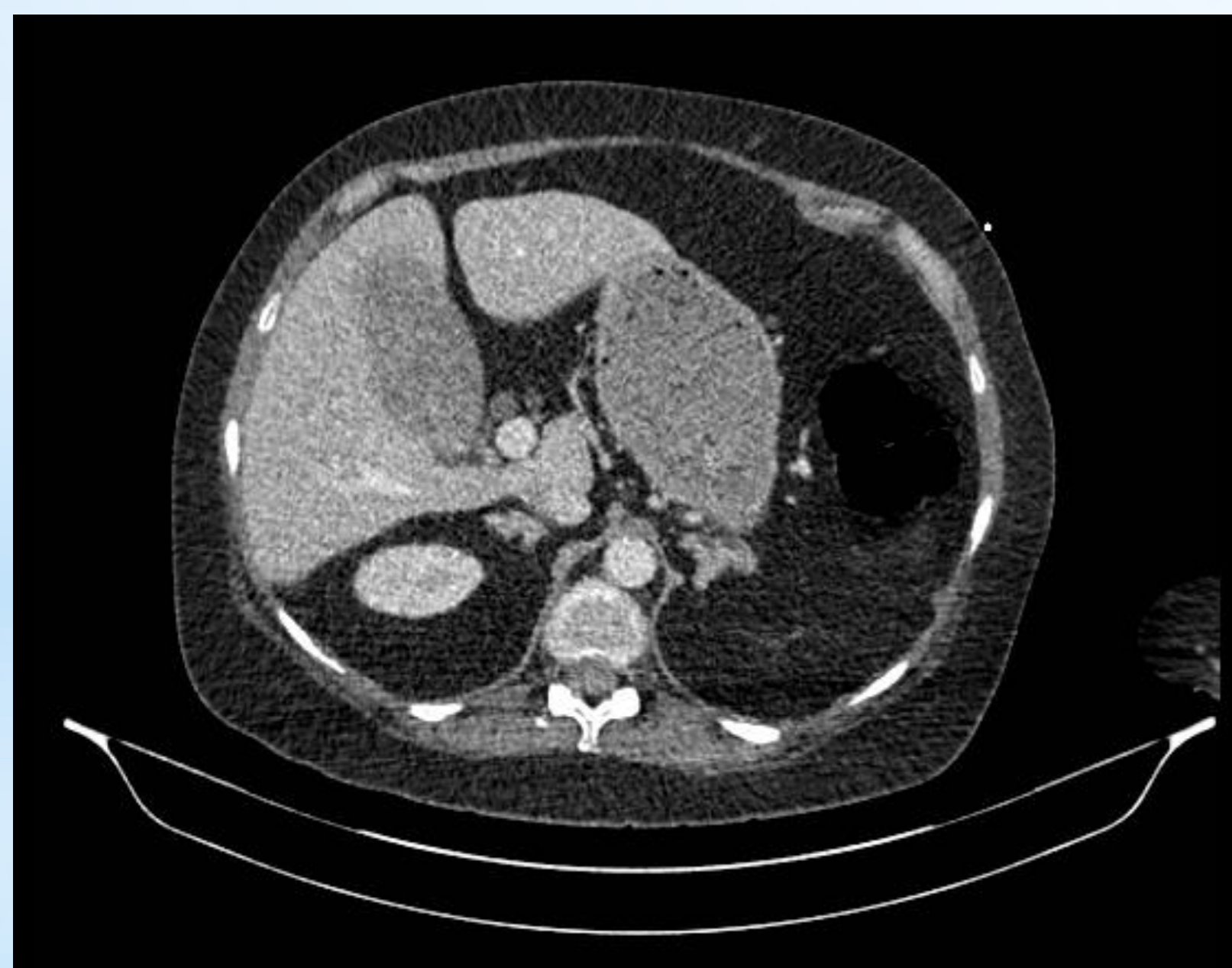
Further history:

- No change in weight
- Thin arms and legs with muscle weakness
- Type 2 diabetic and hypertensive on 3 medications
- Examination - Round face, difficult getting out of chair, thin skin, bruises and dorso-cervical fat pad

Investigations:



Left: Initial CT colonogram reported as showing bulky left adrenal measuring 14mm.



Right: Biochemistry from nurse led incidentaloma clinic and further investigations.

Test	Result	Test	Result
LH	2.2 iu/L	24 h Urine Free Cortisol	1136 nmol/24h (28 - 221)
FSH	5.6 iu/L	24 h Urine catecholamines	Normal
Progesterone	2.5 nmol/L	Overnight dex. supp. Test	427 nmol/L (<50)
Testosterone	1.1 nmol/L (0.2-3)	Pituitary profile	Normal
Androstenedione	11.0 nmol/L (0.7 - 10.8)	Low dose dex. supp. test	360 (<50)
DHEA-S	9.6 umol/L (0.9 - 12)	Aldosterone	111 pmol/L (55 - 421)

Below: Results from CRH test

Time	Cortisol	ACTH
-15	378	24 (0-50)
0	358	24
+15	645	63
+30	897	56
+45	775	43
+60	677	37
+90	498	21
+120	440	17

Discussion:

- This patient was initially referred due to an adrenal incidentaloma.
- Clinical history and examination showed features suggestive of hypercortisolaemia.
- The patient had her initial investigations performed promptly and efficiently through a nurse-led adrenal incidentaloma clinic.
- Reviewing the images of the first CT scan again highlights bilateral bulky adrenals - confirmed with re-imaging through MRI.
- Proceeded to CRH test due to clinical suspicion of pituitary Cushing's.
- CRH test showed exaggerated ACTH response.

Conclusion:

- Specific nurse led adrenal incidentaloma clinics are useful to ensure patients receive appropriate initial investigations in a timely manner and helps reduce patients' visits to hospital for appointments.
- Functional adrenal tumours picked up from incidentalomas are not uncommon however functional pituitary lesions discovered following the detection of an adrenal incidentaloma is less common.
- It is important to ensure adequate investigations are performed to confirm the diagnosis before proceeding to definitive management.
- This patient has undergone a trans-sphenoidal hypophsectomy and is doing well on replacement hydrocortisone. She has managed to stop all of her anti-hypertensives and her Cushing's Disease is in remission.