

# An Interesting Case of Adrenal Adenoma

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## Introduction

We describe a case of young girl, who initially presented with androgen producing adrenal adenoma, and post-operatively, the other adrenal gland profoundly cortisol suppressed, suggesting that the adenoma was co-producing both androgen and cortisol.

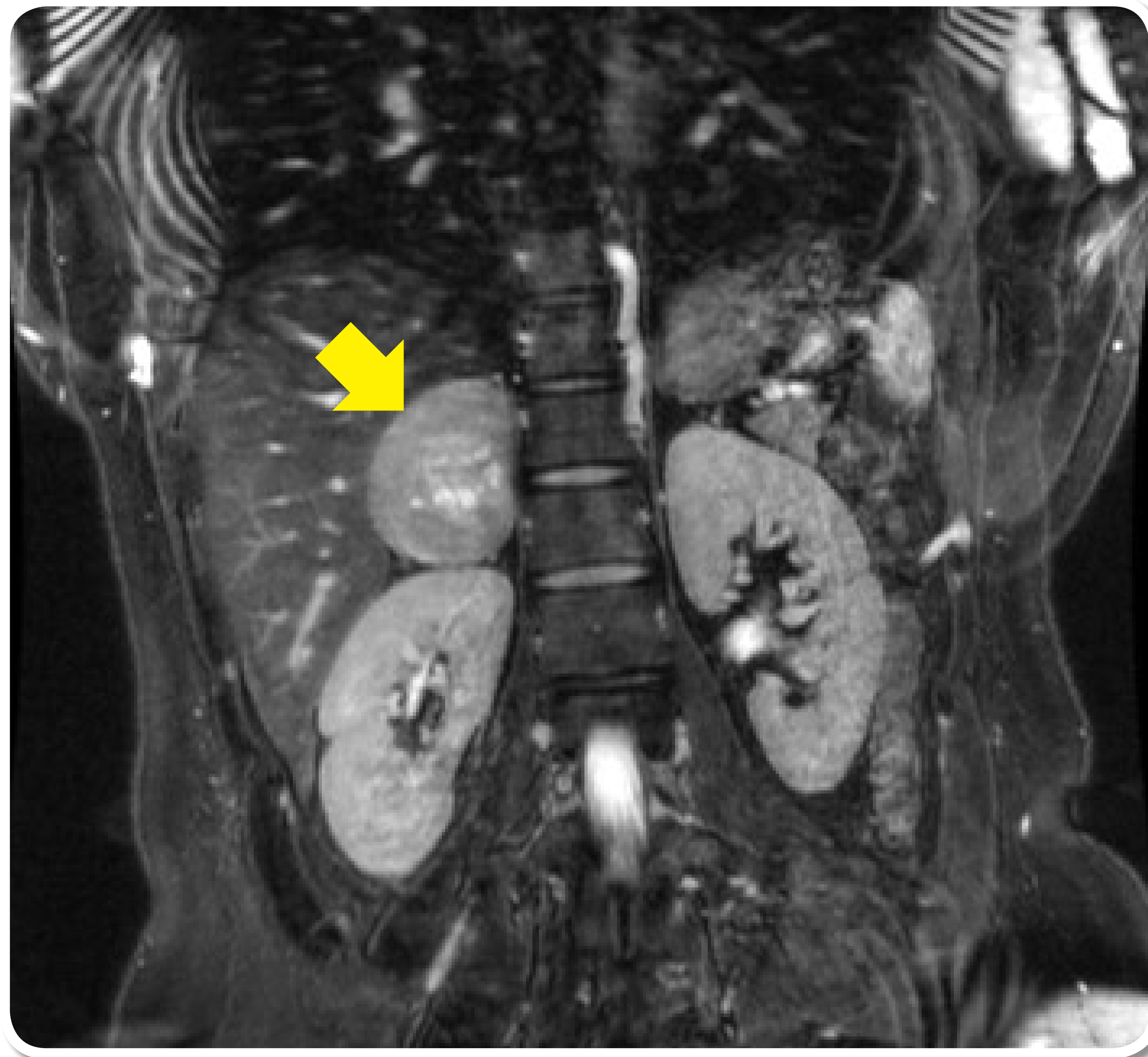
## Case Report

A 29 year old girl initially presented, with 8 months history of hirsutism and cranial hair loss. She had a normal menarche and menstrual cycles and conceived two children without difficulty and no suggestion of early virilisation.

Examination showed facial and abdominal hirsutism, but no clinical features of Cushing's syndrome.

Blood tests showed raised testosterone **5.3nmol/L** (normal <1.5nmol/L), raised androstenedione **18.7nmol/L** (normal <6nmol/L) and normal DHEAS. Her Aldosterone renin ratio was normal at 284 and 9 am cortisol was 466.

## CT Abdomen



## Post Operative Blood Test

Aldosterone level:	198 nmol/L
Aldosterone-renin ratio:	248 nmol/L
Renin activity:	0.8
17-hydroxyprogesterone:	<b>6.8</b> nmol/L (0-6)
LH:	<1.0 U/L (2-13)
FSH:	<1.0 U/L (94-13)
Serum estradiol:	678 pmol/L (46-600)
Prolactin:	270 mU/L (100-496)
SHBG:	93 nmol/L (18-114)
Testosterone level:	<b>5.3</b> nmol/L ( $\leq 1.5$ )
DHEA sulphate:	4.9 micromol/L (1-12)
Androstenedione:	<b>18.7</b> nmol/L (0-6)
Serum cortisol:	468 nmol/L
Basal cortisol:	466 nmol/L
30-minute cortisol:	743 nmol/L

CT scan demonstrated a well circumscribed 5cm right adrenal mass with no concerning features. She had a laparoscopic left adrenalectomy and the histology confirmed adreno-cortical adenoma

6 weeks post-operatively she presented with ongoing tiredness and a short synacthen test showed sub optimal cortisol increase from 150 to 339nmol/L. She was commenced on hydrocortisone and test repeated 6 weeks later, which re-confirmed that the other adrenal gland was still suppressed with cortisol values increasing from 24 to just 70nmol/L.

## Post Operative Bloods

ACTH:	18	
SHBG:	81	
Testosterone level:	0.9	
Free androgen index:	1.1	
Androstenedione:	2.6	
DHEA sulphate:	0.5	
Basal cortisol:	150	24
30-minute cortisol:	339	70

## Discussion

Due to profound suppression of the contra lateral adrenal gland, it is likely that she has had subclinical Cushing syndrome and the adenoma was co secreting both androgen and cortisol. Interestingly she had an uneventful surgery and good recovery without any steroid cover.

Sub clinical Cushing syndrome in virilising or aldosterone producing adrenal tumour although not common is well described in the literature. Although clinically she was not cushingoid, she could have had screening for Cushing's pre-operatively.

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