

# ANDROGEN PRODUCING ADENOMA IN A PATIENT WITH NON-DIAGNOSED CONGENITAL ADRENAL HYPERPLASIA.

Authors: Kosák M<sup>1</sup>, Hana jr. V<sup>1</sup>, Michalsky D<sup>2</sup>, Kubinyi J<sup>3</sup>, Hana V<sup>1</sup>

1 - Third Department of Medicine, General University Hospital and First Faculty of Medicine, Charles University, Prague, Czech Republic; 2 - First Department of Surgery, General University Hospital and First Faculty of Medicine, Charles University, Prague, Czech Republic; 3 - Institute of Nuclear Medicine, General University Hospital and First Faculty of Medicine, Charles University, Prague, Czech Republic

## INTRODUCTION

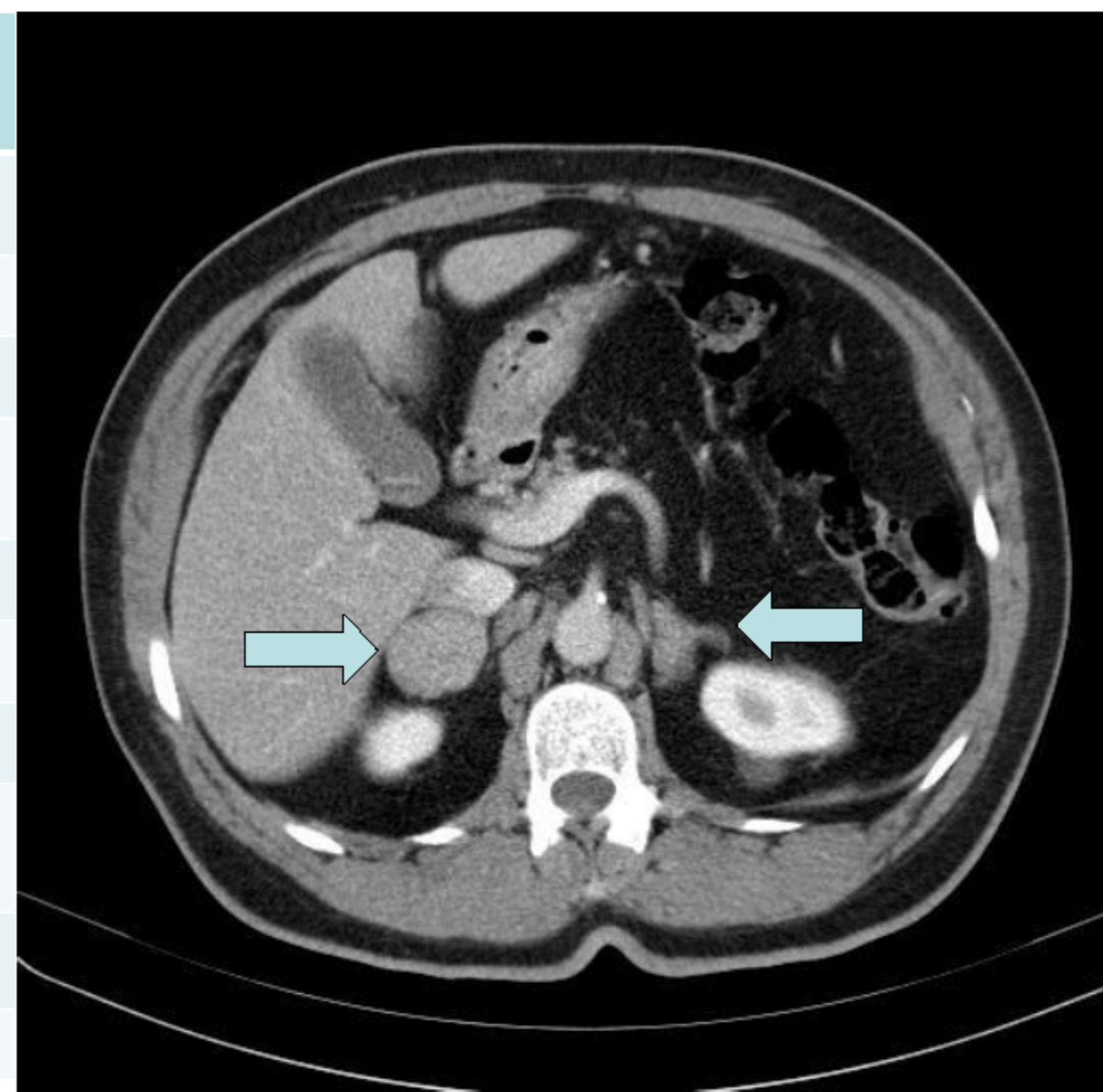
Androgen secreting adrenal tumor is a rare cause of androgen excess in women. There are only few case-reports of androgen producing adenoma in a patient with congenital adrenal hyperplasia.

Our patient, 61 year old woman was referred to our department for progressive hirsutism and androgenic alopecia. She didn't mention neither excessive facial hair growth nor balding until age of 59 when rapidly progressive balding and overt hirsutism started. She has had 3 childbirths and 3 abortions in the past.

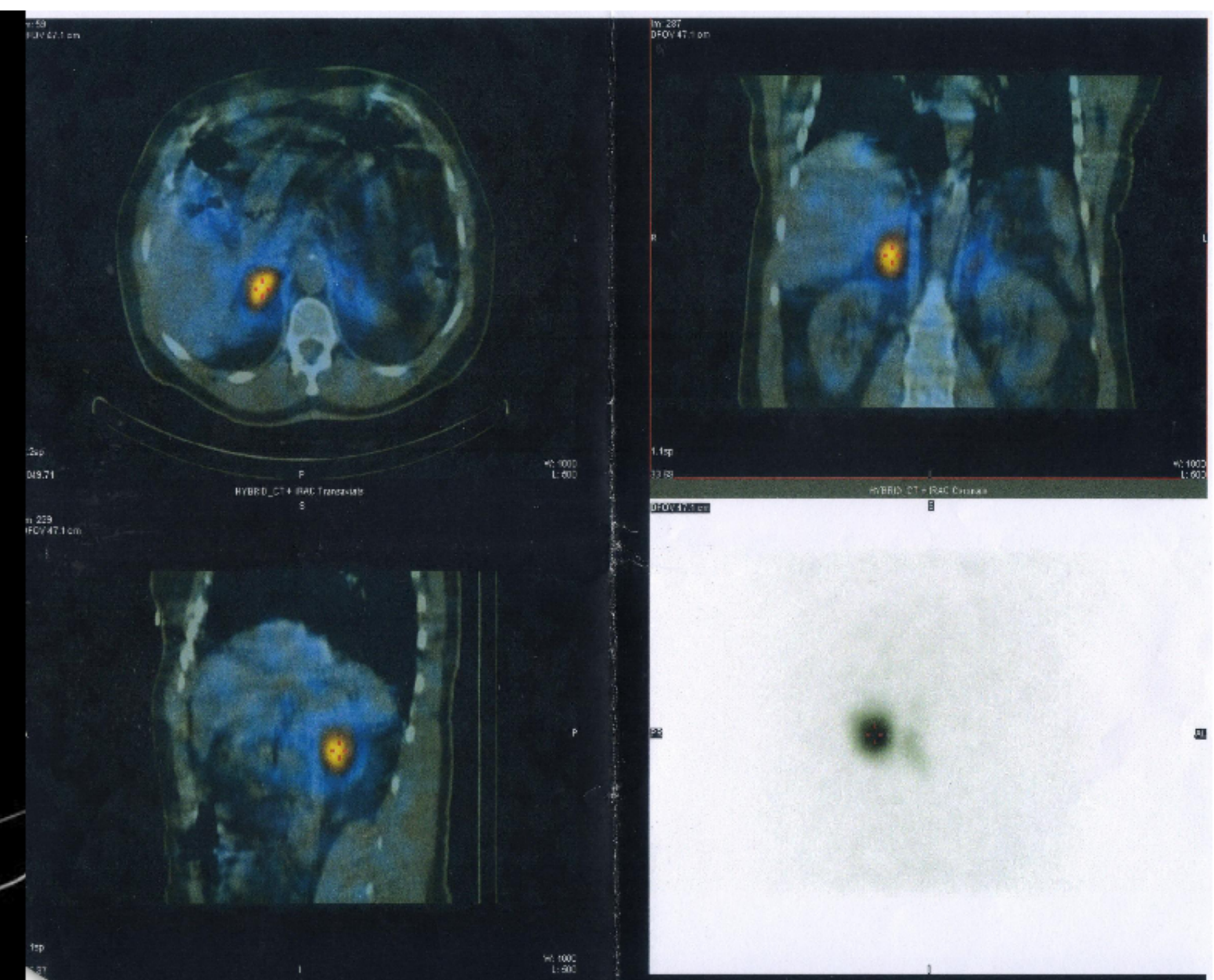
## RESULTS

		Ref. values	LDDST
4-androstendion (nmol/L)	<b>82,67</b>	0,90..4,52	<b>6,88</b>
DHEA (ug/L)	7,30	0,80..9,20	2,40
S_DHEA (umol/L)	<b>4,78</b>	0,09..3,70	2,25
17-OH progesterone (nmol/L)	<b>228,0.....34,2</b>	0,30..4,50	7,37
LH (IU/L)	<b>22,18</b>		
FSH (IU/L)	<b>32,6</b>		
Estradiol (nmol/L)	<b>0,19</b>	0,04..0,14	
Testosterone (nmol/L)	<b>9,1</b>	0,40..2,5	<b>3,25</b>
Kortizol (nmol/L)	360		53
ACTH (ng/L)	29,3	10-60	2,2

Laboratory results at admission



CT scan showing tumors of both adrenals (40x30x30 mm in the right gland and 30x25x20 mm in the left).



Scintigraphy with <sup>131</sup>I-6β-iodomethyl-19-norcholesterol which showed enhanced accumulation of the substance in the right adrenal gland.

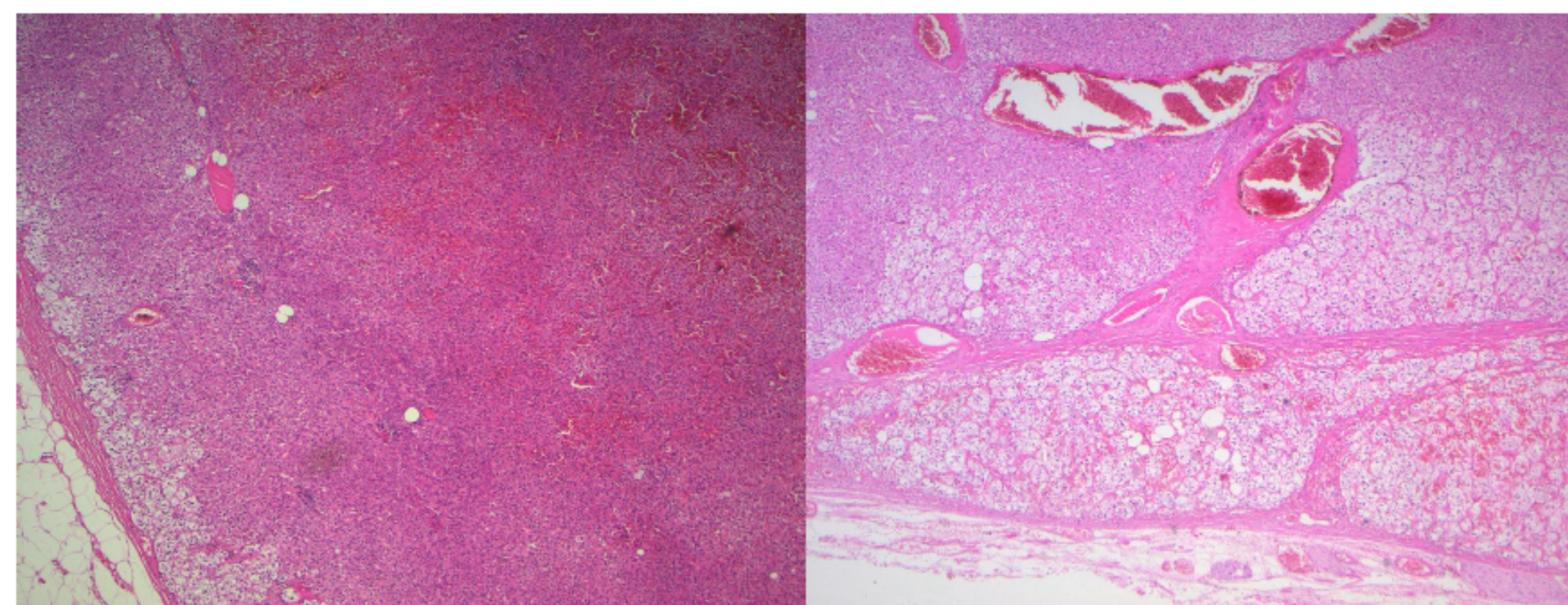
## TREATMENT

With suspicion on androgen producing adenoma laparoscopic adrenalectomy of the right adrenal was performed:

4-androstendion (nmol/L)	<b>8,06</b>
DHEA (ug/L)	2,40
S_DHEA (umol/L)	1,03
17-OH progesterone (nmol/L)	<b>129,26</b>
LH (IU/L)	27,53
FSH (IU/L)	47,15
Estradiol (nmol/L)	<b>294,4</b>
Testosterone (nmol/L)	1,86
ACTH (ng/L)	<b>294,4</b>

Laboratory results after surgery

**Histology** revealed yellowish tumor in the adrenal cortex 40 x 30 x 20 mm. cortical adenoma adenoma. Surrounding cortex with hyperplasia:



### Genetic test

Due to persistent elevation of 17-OHP, despite normalization of androgens (testosterone and 4-androstendion) significantly elevated before surgery, test for suspected congenital adrenal hyperplasia (21 OH def.) was performed. Our patient is compound heterozygote for CAH.

Treatment with corticosteroids, to suppress the androgen overproduction from the left adrenal was commenced.

## CONCLUSIONS

Androgen secreting adenoma is a rare cause of hyperandrogenism. In the presented case adenoma had developed in a patient with, so far undiagnosed, congenital adrenal hyperplasia.

