

Adrenal androgen secreting tumour in 39-year-old woman: hormones and sexuality



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Introduction. Androgen secreting adrenal tumours are rare and sometimes malignant.

We report hormonal and sexual changes in 39-year-old woman with androgen secreting adrenal tumour completely healed by resection of the tumour.

Androgen secreting adrenal tumour that manifested in 39-year-old woman with suddenly appeared amenorrhea, weight gain, hirsutism, epileptic seizures and elevated DHEA-S and testosterone is described.

Conclusions. Appearance of an unusual symptom - seizures and their disappearance after successful removal of the adrenal tumour are highly suggestive about the DHEA-S – induced seizures. This case raises a hypothesis, that controversial changes of sexuality are conditioned by desensitization of testosterone receptors because of constant and long-lasting increase of testosterone secretion.

Results. All the hormone levels before and 2, 24 hours and 1, 3, 6, 12 months after the surgery are presented in the table. DHEA-S was 3 times and testosterone 9 times higher than highest normal values. Complete surgical removal of androgen secreting adrenal adenoma conditioned decrease of DHEA-S, testosterone and other adrenal hormones in 2 and 24 hours after the surgery. 1 month later all the hormones returned to normal levels.



Computed tomography of the tumour of the right adrenal gland (The tumour outlined with a white line).



Laparoscopically excised tumour of the right adrenal gland, weighting 137 g. The tumor was red - yellowish – brown with intact capsule.

Results. Androgen secreting adrenal tumour and female sexual function (FSFI). Results indicate that women was at sexual dysfunction risk (The FSFI total score ≤ 26.55) 1 month before the operation (The FSFI total score was 19.0) and 1 month after the operation (The FSFI total score was 25.0). The best sexual function was detected 12 months after the operation (The FSFI total score was 33.3).

FSFI	Before the manifestation of the disease	1 month before the operation	1 month after the operation	6 months after the operation	12 months after the operation
Desire	4,8	3	4,2	6	4,8
Arousal	4,8	2,4	3,9	5,7	5,7
Lubrication	6	3,6	5,7	6	6
Orgasm	4,4	3,6	4,4	6	6
Satisfaction	6	2,8	4,4	5,2	5,2
Pain	1,2	3,6	2,4	1,2	5,6
Total FSFI score	27,2	19	25	30,1	33,3

Hormone	Concentration before the surgery	Concentrations after the surgery					
		6 hours	24 hours	1 month	3 months	6 months	12 months
DHEA-S	25.5↑↑	6.6(n)	1.1↓	3.61	3,0	NT	2,3
Testosterone	20.6↑↑↑	9.96↑	1.11	1.55	1,38	NT	1,19
Estradiol	519	196	141↓	266	108)	NT	626
Cortisol	260	66↓	32↓↓	201	144	NT	205
Aldosterone	706	464	80.5	606↑↑	1189↑↑	1468↑↑	1058↑
Progesterone	16	NT	NT	23	2,9	NT	NT
17-OH progesterone	4.38	NT	NT	3,0	1,81	1,83	1,94
ACTH	1.9	0.6↓↓	0.5↓↓	3,0	3,7	NT	5,2
Renin	4.0	<0.78↓↓	<0.78↓↓	5,9	9,4	8,7	2,9
Metanephrine	0.16	0.14	0.01↓↓	0.2	0,06	0,12	0,11
Normetanephrine	0.4	0.46	0.05↓↓	0.4	0,17	0,77	0,22
LH	1.72↓	NT	NT	2.7	4,87	NT	4,3
FSH	2.13↓	NT	NT	5.0	2,31↓	NT	3,1
Prolactin	44,0↓	NT	NT	50,0↓	66,2	NT	170

References:

- Reddy DS. Neurosteroids: endogenous role in the human brain and therapeutic potentials. Prog Brain Res. 2010;186:113-37.
- Terzolo M, Alì A, Osella G, Reimondo G, Pia A, Peretti P, Paccotti P, Angeli A. The value of dehydroepiandrosterone sulfate measurement in the differentiation between benign and malignant adrenal masses. Eur J Endocrinol. 2000 Jun;142(6):611-617.