Adrenal medullary hyperplasia recognized initially as incydentaloma

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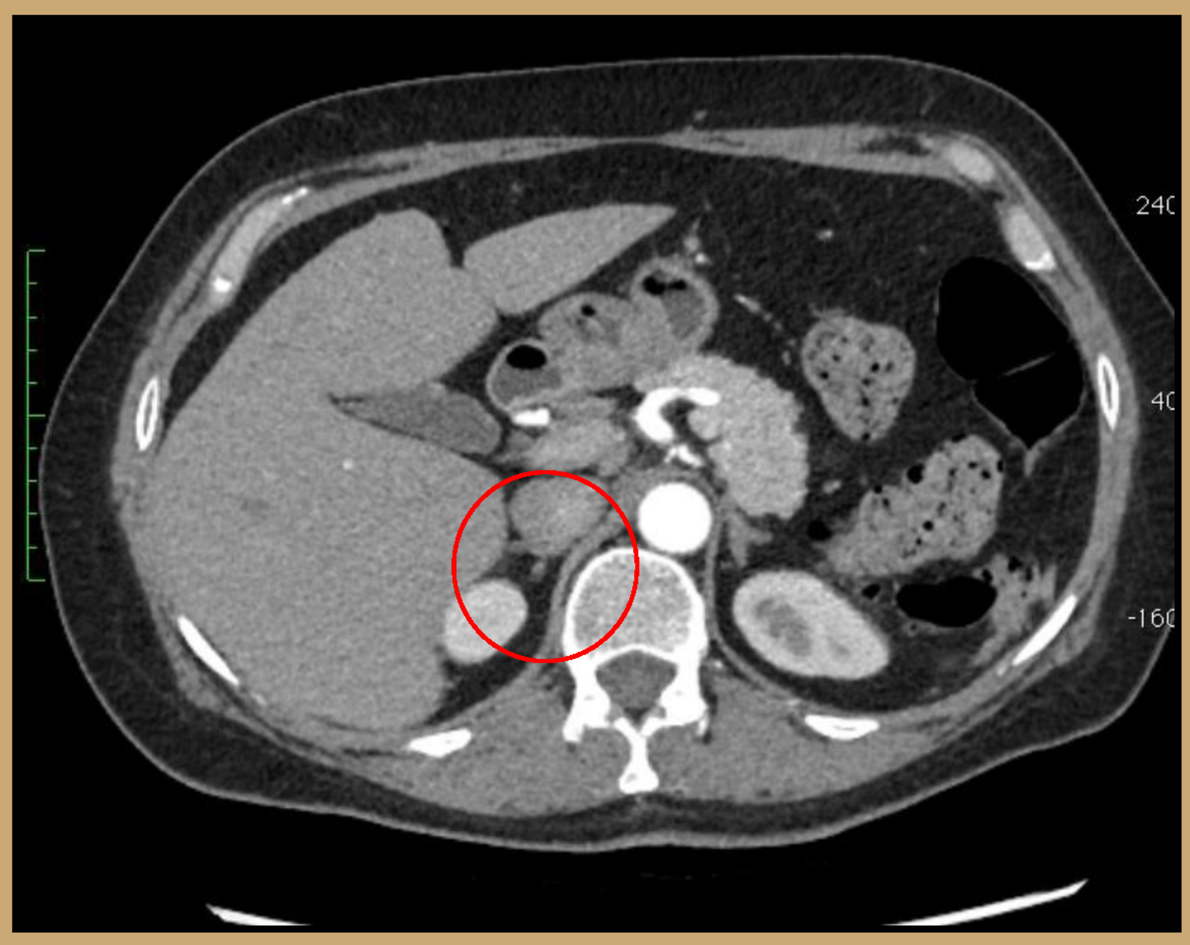
Introduction. Adrenal medullary hyperplasia [AMH] is a syndrome of catecholamine excess, much rarer than pheochromocytoma. AMH can be a benign lesion with mild biological behavior. Adrenal overgrowth is usually bilateral with a presence of small, diffuse nodular alterations in medulla. It is regarded as a precursor of pheochromocytoma and has been reported as a component of MEN2. Due to similar clinical signs, laboratory results and radiological adrenal picture, AMH can be misdiagnosed as pheochromocytoma. The only method that allows determining a proper diagnosis of AMH is pathologic examination.

Aim of the study was to present a patient with AMH primary diagnosed as adrenal incydentaloma.

Case report. 54-year-old female, without hypertension or other symptoms of catecholamine excess, was admitted to our ward because of incidentally discovered nodular masses [18x8mm] in right adrenal gland [Fig.1]. Initial tumor CT density was 36 HU and after contrast administration it was in subsequent phases: 56, 78 and 55 HU respectively. Left adrenal gland was normal. Oncologic vigilance was suggested. Laboratory assessment excluded hormonal activity of the tumor and daily urinary excretion of metoxycatecholamines was 675µg (n<1000) [Tab.1]. After the patient was prepared for surgery using doxazosine, laparoscopic right adrenalectomy has been conducted. A postoperative pathologic exploration revealed solid orange-yellowish 8mm tumor. Microscopic evaluation confirmed nodular adrenal medullary hyperplasia, chromogranine (+), synaptofizyne (+). Because of the risk of developing a tumor in the opposite adrenal gland further observation was recommended.

Conclusion. AMH can develop without clinical symptoms of catecholamine excess and be recognized as adrenal incydentaloma.

Fig.1 CT picture of right adrenal gland with AMH in our patient.



Tab.1 Results of hormonal evaluation before surgery

Test	Normal range	Patient`s result
Cortisol µg/dl 7-9.00 24.00	4.3 – 22.4	14.8 1.7
Cortisol µg/dl in 1 mg DXM supression test	<1.8	0.8
Daily urinary excretion of cortisol(µg)	55.5 – 286.0	211.2; 126.4
ACTH pg/ml 8.00	7.2-63.6	32.88
DHEAS µg/dl	18.9-205.0	70.44
Aldosterone pg/ml	20.0-180.0	139.0
Renin uIU/ml	4.4-46.1	9.4
Daily urinary excretion of metoxycatecholamines µg	<1000	675
Chromogranine ng/ml	<102	54.0