Clinical review of patients with pheochromocytoma diagnosed between 2011-2015

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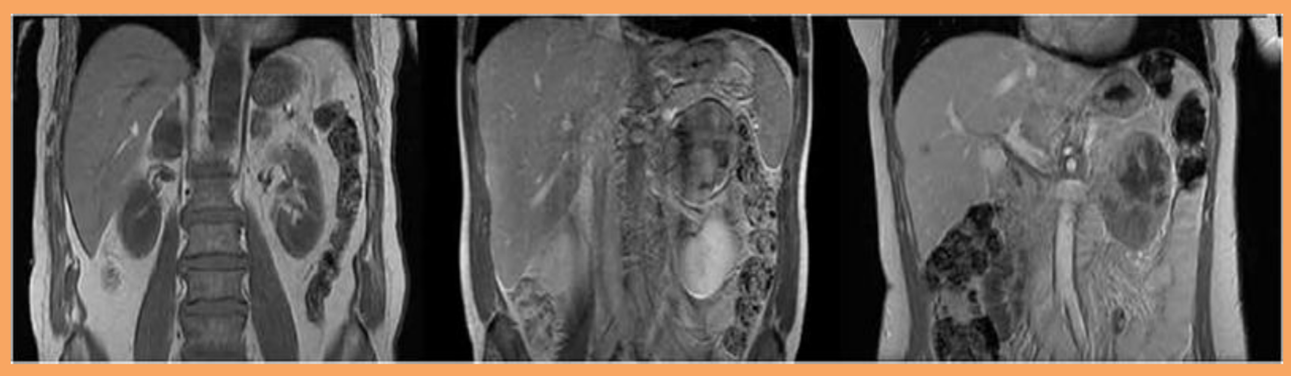
Introduction. WHO classification of endocrine tumors defines pheochromocytoma as a tumor arising from chromaffin cells in the adrenal medulla. Almost all pheochromocytomas produce catecholamines. An annual incidence of this tumor in the general population is estimated at 3-8 cases/million/year. 40-50% of patients with pheochromocytoma are characterized by sustained hypertension, a similar percentage - only by paroxysmal hypertension and up to 10% are normotensive.

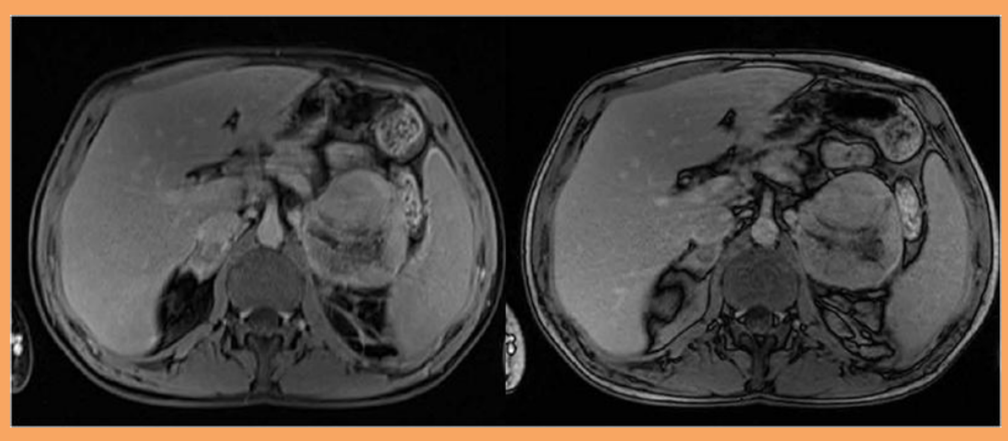
Aim of the study was to identify the most common clinical, hormonal and imaging characteristics of the patients with pheochromocytoma hospitalized in our department between 2011 and 2015, based on retrospective analysis of their medical histories.

Results. The whole group covered 27 patients with confirmed pheochromocytomas. 21 patients [12M; 9F] aged 29-77 years [54.4±16.1] have been diagnosed since the beginning of the disease in our department, while the remaining were originally diagnosed and operated on in other centers. In 3 cases [14.3%] in the same family, finally recognized as MEN 2A, tumors were bilateral. In 3 patients pheochromocytoma was diagnosed as adrenal incydentaloma. In 18 patients the tumor was one-sided [the nine cases in the left and right adrenal gland]. Hypertension, mainly paroxysmal, occurred in 13 patients [62%]. Adrenal tumor was initially detected in CT in 13 cases, in ultrasound in 5 and in MRI in 3 patients. The largest tumor diameter ranged from 10 to 106 mm [mean 48,5±25.1]. Initial tumor CT density ranged between 7 and 51 HU [mean 29.2±12.2] and in all 10 patients who underwent contrast CT ("adrenal protocol") a delayed tumor washout index has been detected. Metoxycatecholamines excretion in daily urine ranged from 100 to 3438 µg.

Conclusion. Paroxysmal hypertension, unilateral location, tumor greatest dimension greater than 4 cm, high basal density and low washout index in CT were the most common clinical features of pheochromocytomas in our group of patients.



Coronal magnetic resonance images of pheochromocytomas in our patients



Abdominal MR of Heterogeneous nodular mass lesion in left adrenal gland (83 × 73 mm) on T1 on-pluise and on T1 out-of-pluise. Analogous lesion (26 × 57 × 34 mm) with areas of necrosis in right adrenal gland