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1.7 Carotid Intima-Media Thickness and Prevalence of Plaques in Patients with Primary Aldosteronism and With Essential Hypertension

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Introduction. Cardiac and vascular alterations as related to a different stimulation of the renin-angiotensin-aldosterone system have been investigated by ultrasound in few studies. The prevalence of LVH, but not of carotid lesions and increased intima-media thickness (IMT), was significantly higher in patients with primary aldosteronism (PA) compared to essential hypertensive patients (EHT).

Aim. To compare LVH and carotid IMT and plaques in patients with PA and essential hypertension.

Methods. In 114 patients with PA (n=69 with adrenal hyperplasia and n=45with adrenal adenoma), (mean age 50 ±11 years,45 F) and in 114 EHT matched for age, sex, and clinic blood pressure (BP), echocardiography and carotid ultrasound was performed. All subjects underwent laboratory examinations, including PRA and plasma aldosterone, and both clinic and 24 hours BP measurement.

Results. No significant differences were observed for clinic and 24 hours BP values, clinic and24 hours heart rate, plasma glucose and lipids between PA and EHT. The prevalence of traditionally defined LVH (LVMI > 47 and 50g/m2.7 in males and women, respectively) was significantly greater in PA then in EHT (45 vs 22 % chi square = 0.02). On the opposite no significant differences were observed between PA and EHT for IMT measured at the site of common carotid (mean max IMT 0.91± 0.18 and 0.92± 0.2 mm), carotid bifurcation (mean max IMT 1.24± 0.32 and 1.23±0.37 mm) and internal carotid (mean max IMT 0.96±0.28and 0.97±0.34 mm), even after adjusting for glucose, cholesterol, smoking and 24 hrs BP. No differences in the prevalence of IM thickening (IMT > 0.9 mm) or plaques (IMT > 1.3 mm) were observed between patients with PA and EHT.

Conclusions. In patients with PA the prevalence of LVH is increased, while no more advanced carotid structural alterations are detectable by ultrasound, in respect to patients with essential hypertension.