

ENDOCCAN CONCENTRATION IN HYPERTENSIVE PATIENTS

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OBJECTIVES

Hypertension is an important risk factor for cardiovascular mortality. Endothelial dysfunction plays an important role in its multifactorial pathophysiology. Endocan, human endothelial cell-specific molecule, which is expressed by the vascular endothelium may play role in endothelium-dependent inflammatory process leading to the development of hypertension. The aim of the study was to estimate endocan concentration in 121 patients with primary hypertension and proper renal function as also in healthy individuals from the control group and to estimate endocan levels in subgroups with proper blood pressure control and without.

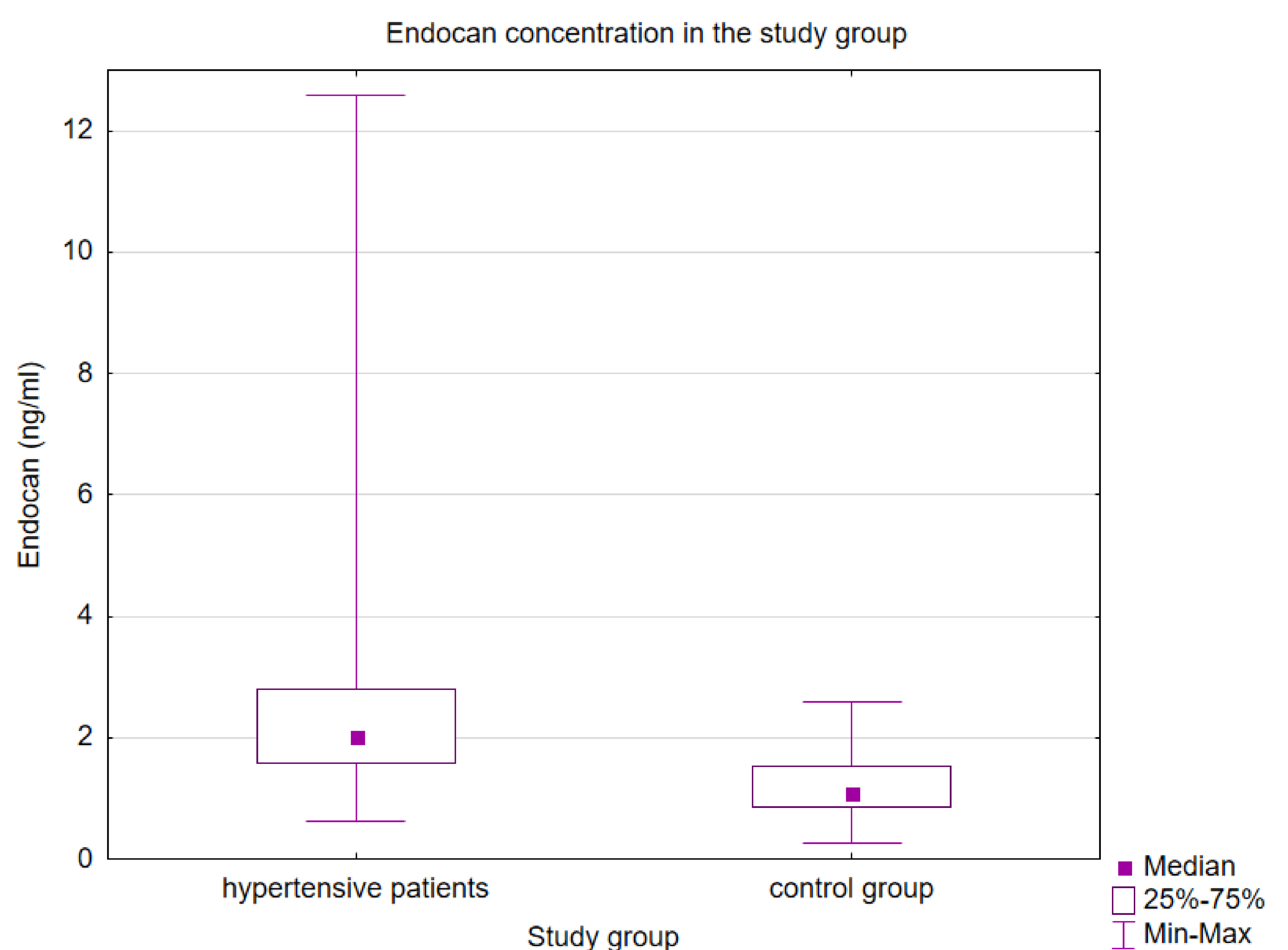
METHODS

The endocan concentration was estimated in 121 hypertensive patients (median age 56 min-19, max-85). The medical history, office blood pressure measurements, 24 hour ambulatory blood pressure measurement (ABPM), laboratory tests and the echocardiography were taken, the medical therapy was analysed. The correlation between endocan levels and catecholamine concentration in blood, blood pressure control, type of pharmacological therapy and medical history were analysed.

	Ambulatory blood pressure measurements		p
	<140/90 mmHg (N=57)	≥140/90 mmHg (N=62)	
Endocan (ng/ml)	2.28 (0.7; 12.6)	1.91 (0.6; 9.6)	0.021

RESULTS

The median endocan concentration in the whole study group was 1.91 ng/ml. The median endocan level was significantly higher in hypertensive patients than in control group (Me=2,02 ng/ml vs 1.09 ng/ml, p=0.0001). The median office blood pressure in hypertensive patients was 145.5/86 mmHg and was significantly higher than the median home blood pressure measurements, which was 135/80 mmHg, p<0,05. Endocan was higher in patients with proper blood pressure control in ambulatory measurements (Me=2.28ng/ml vs Me=1.91ng/ml). There were no statistically significant differences between endocan level and office blood pressure measurements. Negative correlation was observed between endocan level and BMI (r=-0.19, p=0.046).



CONCLUSIONS

Endocan, as indicator of the endothelium dysfunction could be a predictor of cardiovascular events. Higher endocan concentration in patients with primary hypertension than in control group needs further studies to find out the exact role of endocan in pathogenesis and treatment of primary hypertension.

