

CIRCULATING RENALASE IS ELEVATED IN HYPERTENSIVE PATIENTS AND DEPENDS UPON THE HYPOTENSIVE THERAPY

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OBJECTIVES

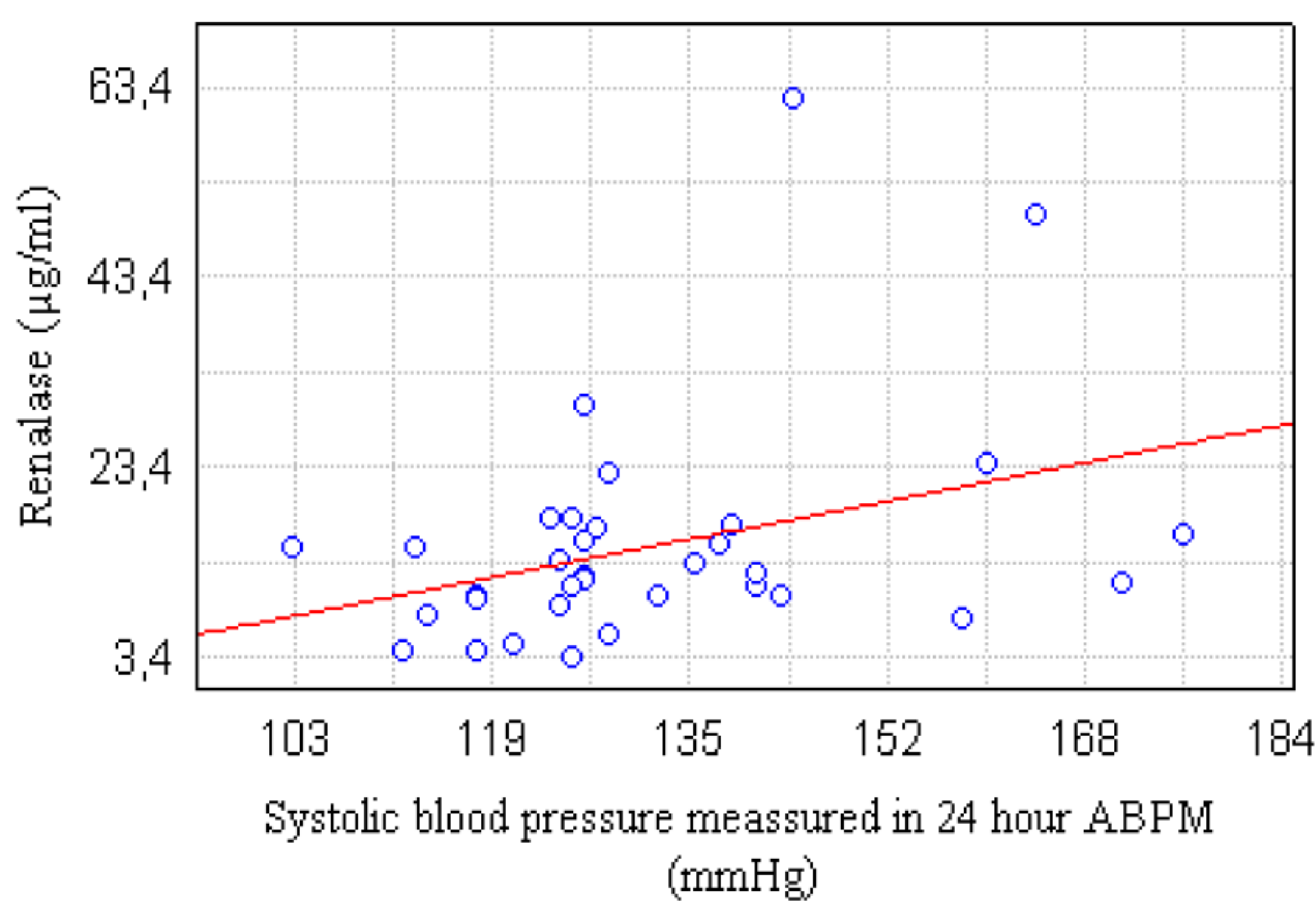
The aim of the study was to assess circulating level of renalase in 96 hypertensive patients and the correlation of renalase with eGFR (estimated glomerular filtration rate), heart rate (HR), BP control, a type of hypotensive therapy and the presence of diabetes and coronary heart disease.



METHODS

The plasma concentration of renalase was assessed in 96 (median age 56 yrs) hypertensive patients. The medical history, BP measurements twice a visit during three visits and 24 hour ambulatory blood pressure measurement (ABPM), HR, laboratory tests and the echocardiography were taken. The connection between renalase and eGFR, HR, BP control, a type of hypotensive therapy and the presence of diabetes and coronary heart disease was analyzed.

Correlation between renalase levels and systolic blood pressure in hypertensive patients



RESULTS

The mean BP was $132 \pm 17 / 76 \pm 10,4$ mmHg and HR - $68,7 \pm 13,3$ beats/min. The main used hypotensive drugs were diuretics - 67,7% and ACEI (angiotensin converting enzyme inhibitor) - 64,5%. Circulating renalase level was significantly higher in patients with hypertension comparing to healthy individuals (Me 11,18 vs 3,86 ug/ml, $p=0,0001$). It was higher in patients treated with ARB (angiotensin receptor blocker) than without (Me 13,14 vs 10,7 ug/ml, $p=0,046$). Renalase correlated with systolic blood pressure measured in 24 hour ABPM. There were no significant differences in renalase level in patients with and without diabetes and with and without coronary artery diseases. No correlation between circulating renalase and eGFR, heart rate or echocardiography parameters was found.

	Hypertensive patients (N=96)	Control group (N=27)	p
Renalase (µg/ml)	Me=11,18 (2,8;62)	Me=3,86 (2,7;5,3)	0,0001

CONCLUSIONS

Renalase still poses an interesting and intriguing properties. Its elevated circulating level in hypertensive patients may prove the role of renalase in the pathogenesis of hypertension. It is probably related to the sympathetic nervous system hyperactivity found in this population, especially if the main used hypotensive drug was beta-blocker.

