



THE RELATION BETWEEN RENALASE LEVELS AND LEFT VENTRICULAR HYPERTROPHY IN HEMODIALYSIS PATIENTS



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INTRODUCTION AND AIMS

Left ventricular hypertrophy (LVH) is one of the most common cardiac abnormalities in patients with end stage renal disease (ESRD). Hypertension, diabetes, increased body mass index, gender, age, anemia and hyperparathyroidism have been described as risk factors for LVH in patients on dialysis. However, there may be other risk factors which have not been described yet. Recent studies show that renalase is associated with cardiovascular events. The aim of this study was to reveal the relation between renalase, LVH in patients under hemodialysis (HD) treatment

METHODS

The study included 50 hemodialysis dialysis (HD) patients and 35 healthy controls. Serum renalase levels, left ventricle mass index (LVMI) were measured in all participants and the relation between these variables were examined

RESULTS

LVMI was positively correlated with dialysis vintage and C-reactive protein (CRP) ($r=0.387$, $P=0.005$ and $r=0.597$, $P<0.001$, respectively, Table1, Figure1) and was negatively correlated with residual diuresis and hemoglobin levels ($r=-0.324$, $P=0.022$ and $r=-0.499$ $p<0.001$, respectively, Table1). There was no significant association of renalase with LVMI in the HD patients ($r=0.263$ $p= 0.065$, Table1, Figure 2). Serum renalase levels were significantly higher in HD patients (212 ± 127 ng/ml) compared to controls (116 ± 67 ng/ml) ($P<0.001$). Renalase was positively correlated with serum creatinine and dialysis vintage ($r=0.677$, $P<0.001$ and $r=0.625$, $P<0.001$, respectively)

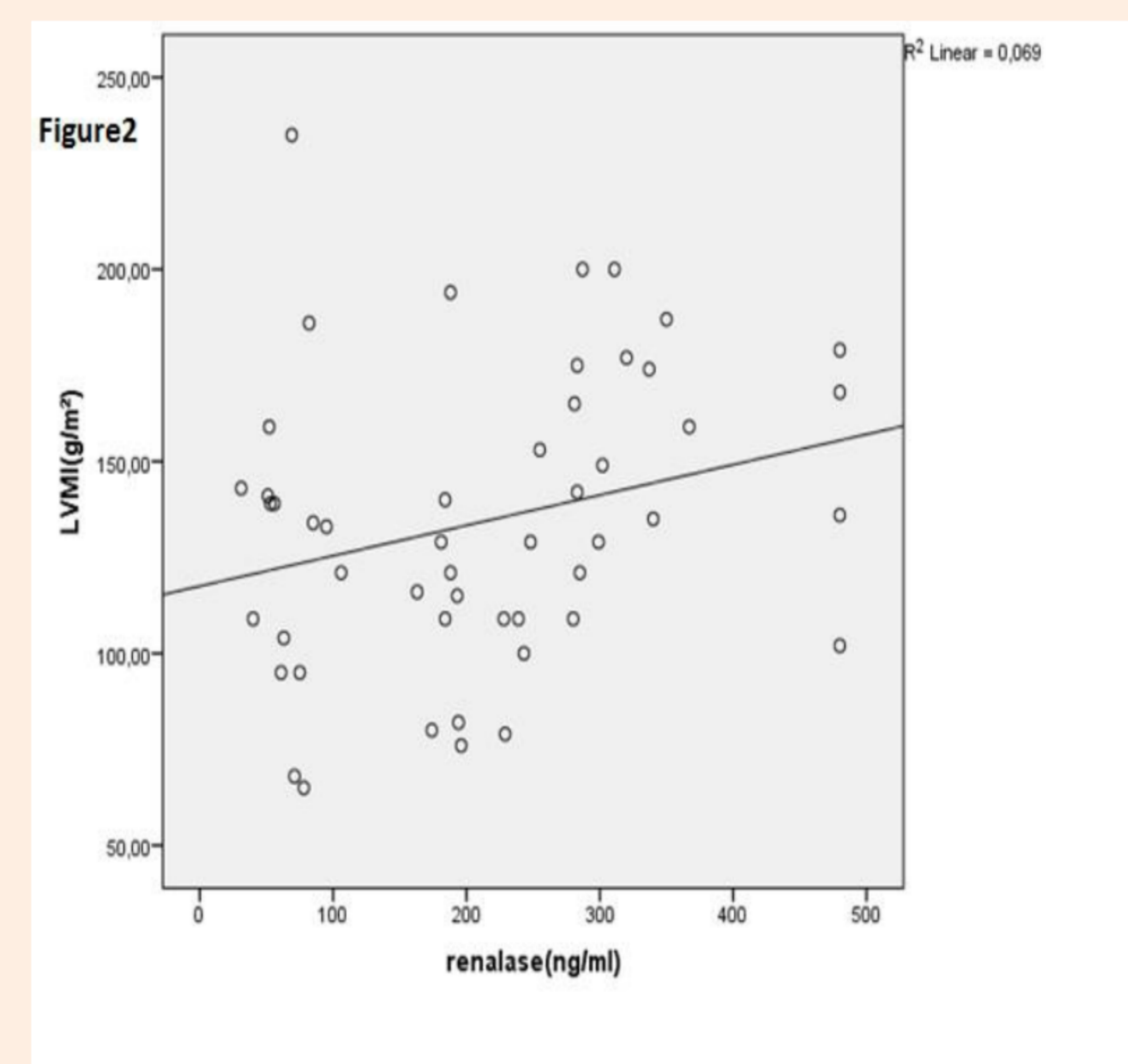
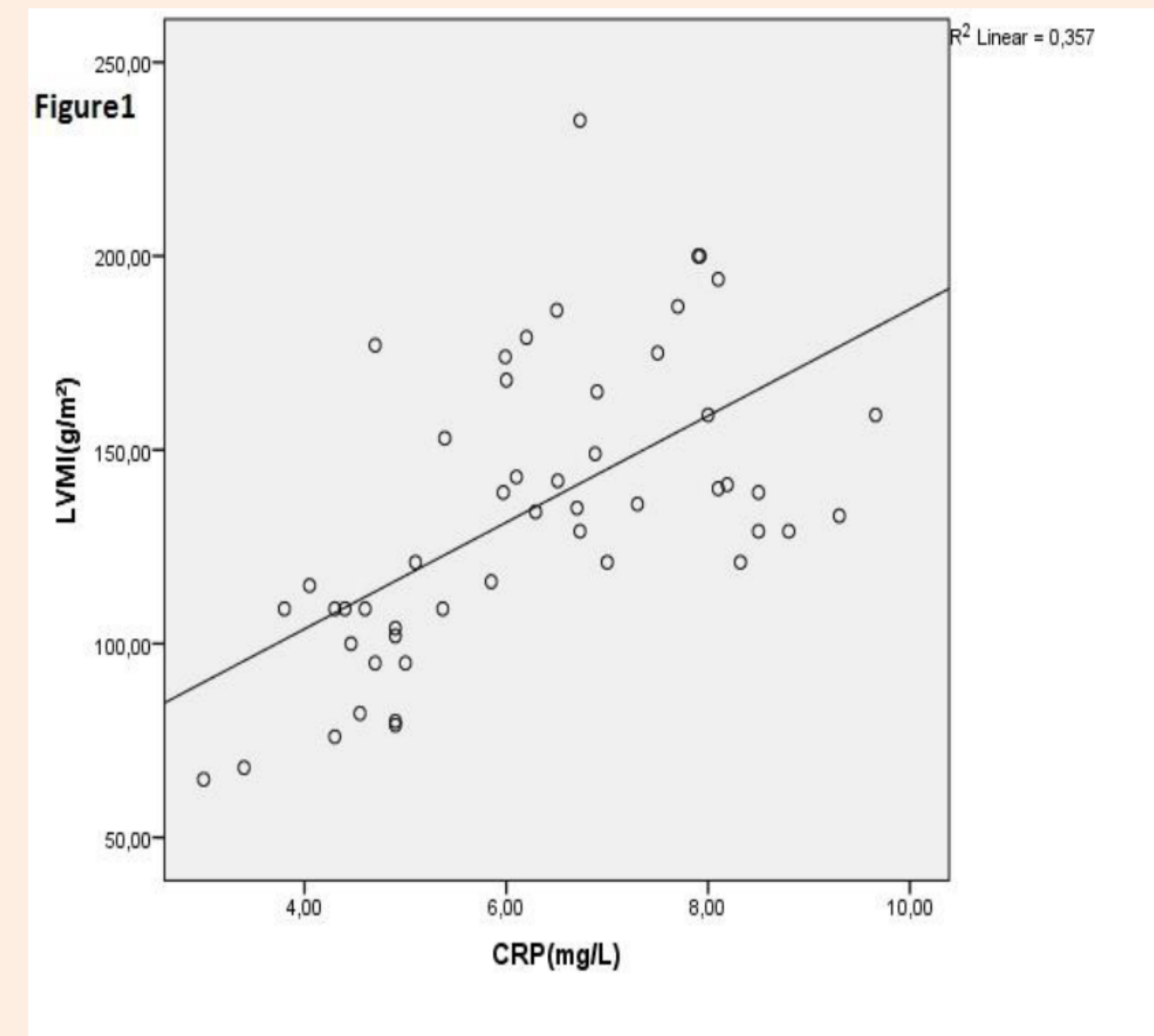


Table1 The correlation between LVMI and biochemical, echocardiographic parameters in HD patients

Variables	r	P value
Age	-0.08	0.956
BMI	-0.176	0.220
Dialysis vintage	0.387	0.005
Residual diuresis 24h	-0.324	0.022
Kt/V	0.023	0.876
SBP	0.045	0.756
DBP	0.243	0.088
Glukoz	-0.058	0.689
Hemoglobin	-0.499	<0.001
Cr	0.042	0.771
CRP	0.597	<0.001
Renalase	0.263	0.065

CONCLUSIONS: In our study LVMI was correlated with dialysis vintage, residual diuresis, CRP and hemoglobin. LVMI tends to correlate with renalase and this correlation may be significant in studies with more patient numbers. The main parameters affecting renalase levels are dialysis vintage and serum creatinine

Keyword (Complete): cytokines ; haemodialysis: outcome; haemodialysis: complications ; renal failure: end-stage