



SERUM APELIN IS ASSOCIATED WITH AFFECTIVE DISORDERS IN PERITONEAL DIALYSIS PATIENTS



SP445

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INTRODUCTION AND AIMS

Depression and anxiety are prevalent affective disorders in peritoneal dialysis (PD) patients. Recent research has proposed a potential role of apelinergic system in pathogenesis of depression. The present study aimed to evaluate the frequency of depression and anxiety and their potential relation with serum apelin levels among PD patients.

METHODS

A total of 40 peritoneal dialysis patients were enrolled into the study. Depressive symptoms and anxiety was assessed with the Beck's Depression Inventory and the Beck's Anxiety Inventory. Serum apelin-12 levels were measured by immunoenzymatic assays using commercially available ELISA kit for standard human apelin.

RESULTS

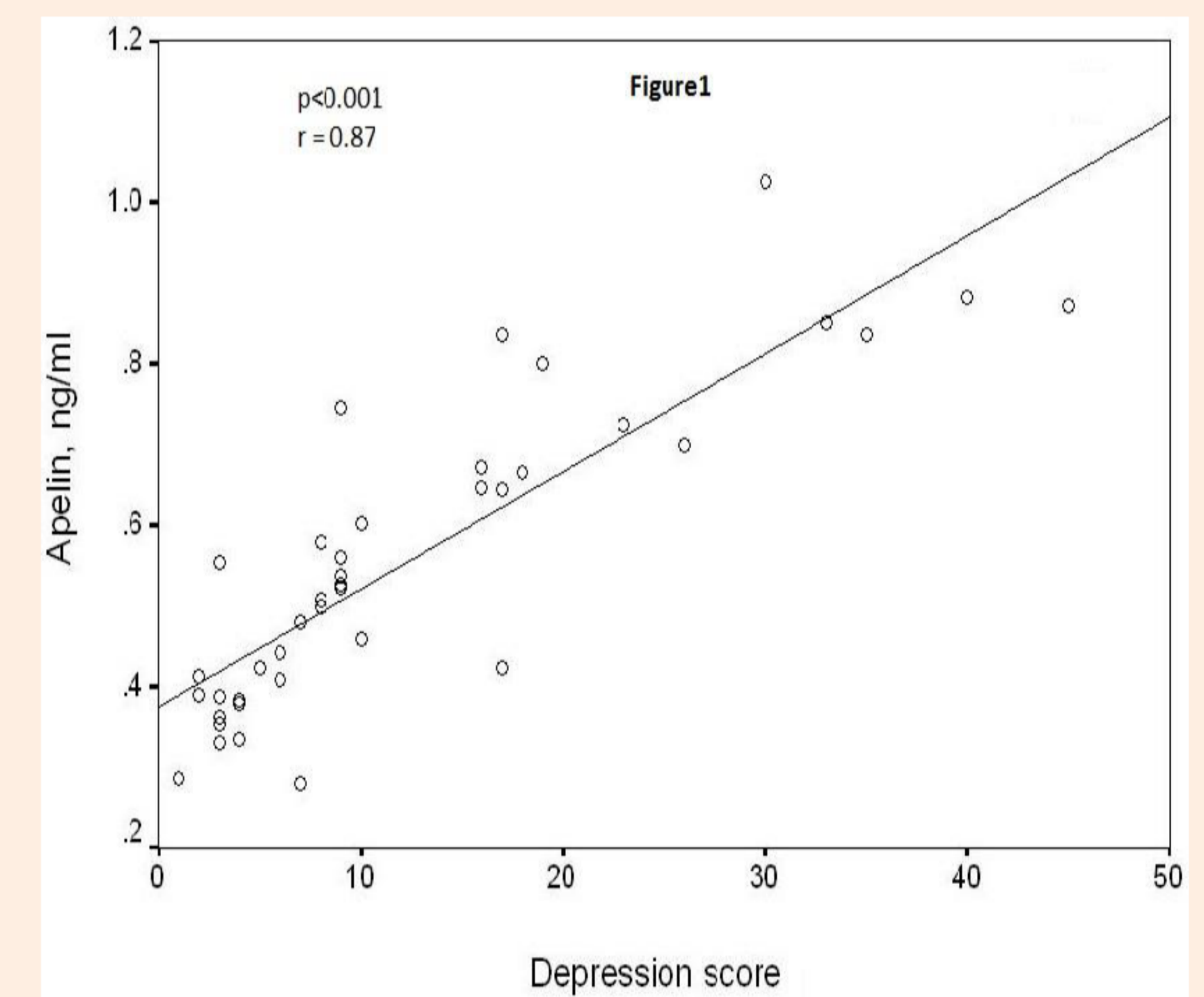
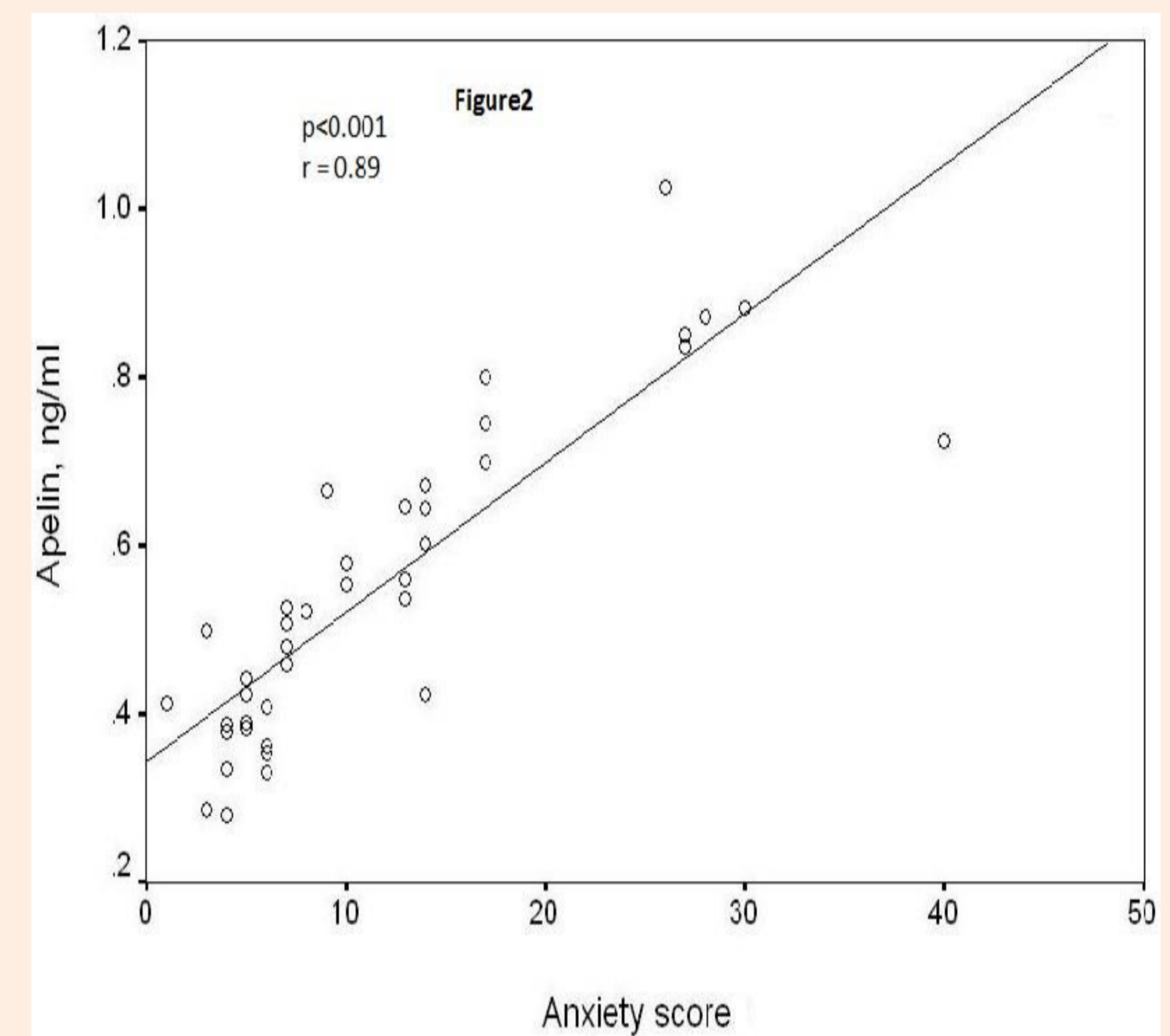
Of the patients, 16 (40%) had depression, 20 (50%) had anxiety. The patients with depression and anxiety had a significantly longer time on dialysis ($p < 0.001$ for both), significantly higher serum apelin ($p < 0.001$ for both) and C-reactive protein levels ($p < 0.001$ for both) than those without depression and anxiety. We performed a multivariate linear regression analysis including predictive parameters (dialysis vintage, CRP and apelin level). Serum apelin was the only parameter associated independently with depression and anxiety. After adjustment for age and gender, serum apelin still remained significantly associated with depression and anxiety scores (Table1, 2). In Pearson correlation analysis, depression and anxiety scores had strong correlation with serum apelin levels ($r = 0.87$, $P < 0.001$; $r = 0.89$, $P < 0.001$ respectively, Figure1, 2). The percentage of patients with depression and anxiety increased in a graded fashion from the low- to high- apelin group. Interestingly, all patients in the high group (all of 13 patients), who had serum apelin levels > 0.64 ng/ml, had anxiety.

Table1 Independent variables associated with depression score

Variables	Beta	P
Age	0.070	0.447
Gender	-1.185	0.999
Time on PD	-0.078	0.685
Apelin	0.852	<0.001
CRP	0.090	0.509

Table2 Independent variables associated with anxiety score

Variables	Beta	P
Age	-0.094	0.294
Gender	0.046	0.628
Time on PD	-0.039	0.834
Apelin	0.751	<0.001
CRP	0.101	0.448



CONCLUSIONS: A substantial number of PD patients had depression and anxiety. Increased levels of serum apelin may constitute a significant independent predictor of development of depression and anxiety in PD patients.

Keyword (Complete): cytokines ; peritoneal dialysis: outcome; peritoneal dialysis: complications