

TYPE OF FISTULA, NYHA CLASS AND APELIN, NEWLY DISCOVERED ADIPOCYTOKINE IN HEMODIALYZED PATIENTS.

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Apelin, newly discovered adipocytokine, is produced by white adipose tissue and also expressed in kidney and heart. Increasing evidence suggests a role for the apelin in the pathology of the cardiovascular system. It was demonstrated that apelin may contribute to the pathophysiology of human chronic heart failure. Cardiovascular disease is a major contributor to the mortality and morbidity in patients with chronic renal failure

The aim of the study was to assess associations between apelin, NYHA class and location of a-v fistula in hemodialyzed patients. We investigated plasma apelin levels in 100 clinically stable hemodialyzed patients. Apelin was assayed by radioimmunoassay using commercially available kit from Phoenix Pharmaceuticals Inc, USA.

In patients with a-v fistula on the forearm (n=77) apelin was significantly higher than in patients with a-v fistula on the arm (n=23). Patients with forearm a-v fistula LVIDd-left ventricular internal enddiastolic dimension, LVISd-left ventricular internal endsystolic dimension, NYHA class, CRP were lower, ejection fraction was higher relative to patients with arm a-v fistula. Apelin was related positively to echocardiographic parameters, negatively to the presence of diabetes, coronary artery disease, chronic heart failure, NYHA class and serum lipids.

Apelin is significantly lowered in dialyzed patients with coronary artery disease, chronic heart failure and its level is predicted by cardiac function. Apelin might be involved in the pathophysiology of cardiovascular disease in chronic renal failure. Fistula created on the arm might contribute to the development of worsening of the chronic heart failure in hemodialyzed patients.