Treatment with cinacalcet increases plasma adiponectin concentration in hemodialysed patients with chronic kidney disease and secondary hyperparathyroidism

Piotr Kuczera[1], Marcin Adamczak[1], Grzegorz Machnik[2], Boguslaw Okopien[2] and Andrzej Wiecek[1]

[1] Department of Nephrology, Transplantation and Internal Medicine
[2] Department of Internal Medicine and Clinical Pharmacology,
Medical University of Silesia, Katowice, Poland

BACKGROUND

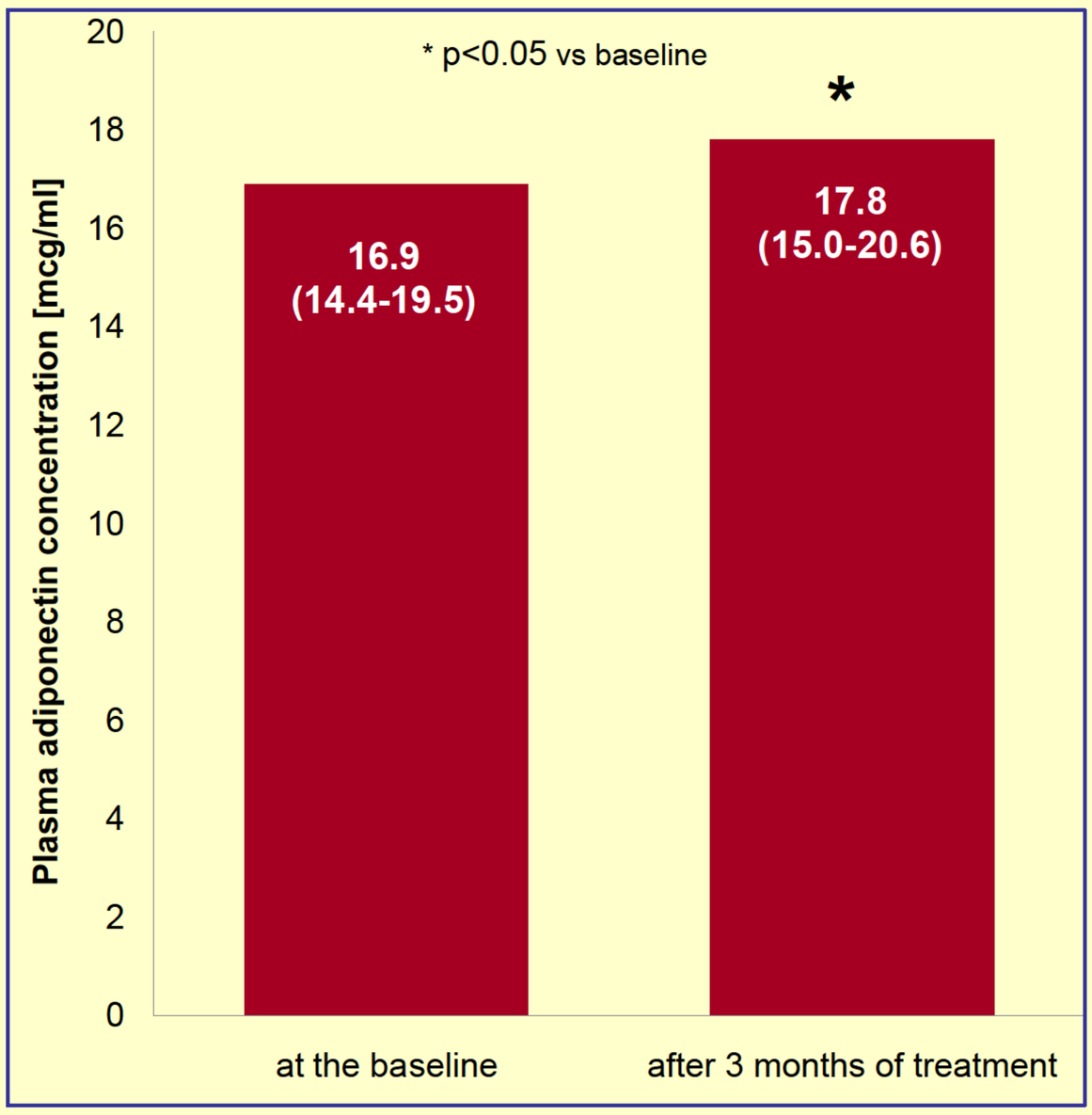
Cinacalcet increases the sensitivity of calcium receptor (CaR) to circulating serum calcium. CaR is expressed also in adipocytes which secrete among others adiponectin – a beneficial adipokine with antiatherogenic and insulin-sensitizing properties. The aim of this study was to assess the influence of 3-month cinacalcet therapy on plasma adiponectin concentration in hemodialysed patients with chronic kidney disease (HDP) and secondary hyperparathyroidism (sHPT).

METHODS

In 65 HDP [38 males, 27 females; mean age 53.6 (50.0-57.1) years] with sHPT treated with cinacalcet (30-120 mg/day) plasma adiponectin, advanced oxidation protein products (AOPP), serum interleukin-6 (IL-6) and C-reactive protein (CRP) concentrations were assessed before the first dose of cinacalcet and after 3 months of treatment. The results are shown as means and 95% confidence index.

RESULTS

Three months of treatment with cinacalcet resulted in a significant decrease of serum parathormone (PTH) concentration - from 1089 (891-1286) pg/ml to 775 (574-976) pg/ml; $p<0.0001$. This was also associated with a significant ($p=0.048$) increase of plasma adiponectin concentration – from 16.9 (14.4-19.5) µg/ml to 17.8 (15.0-20.6) µg/ml and significant ($p=0.03$) decrease of plasma AOPP concentration – from 186.7 (156.7-216.7) pg/ml to 162.6 (141.2-183.9). BMI and mean concentration of serum markers of inflammation were stable during the entire treatment period.



CONCLUSIONS

1. Three months treatment with cinacalcet in haemodialysed patients with sHPT leads to increased plasma adiponectin concentration. 2. Increased adiponectinemia may be related to the reduction of oxidative stress and may lead to reduction of cardiovascular complications in HDP.

DOI: 10.3252/pso.eu.52era.2015