Abstract

Introduction: Abdominal fat mass is an important risk factor of inflammation in the general population as it is in haemodialysis (HD) patients. The aim of this study was to investigate the association of adiposity using the conicity index (Ci) with nutritional-inflammatory markers and to analyse whether these factors were related with the clinical outcome in HD patients. Methods: A cross-sectional study in 80 HD patients (men, 65%; aged 68.2 ± 14.2) was carried out. Abdominal fat deposition was evaluated by Ci median with regard to baseline inflammatory, anthropomorphic, and nutritional markers. Linear regression analysis was applied to identify whether serum C-reactive protein (CRP), as an inflammatory biomarker, was an independent predictor of Ci in HD patients. Results: Mean Ci was significantly greater in men (p = 0.001). Significant positive correlations were observed between Ci and serum triglycerides (r = 0.23; p < 0.05) and Ln of serum CRP (r = 0.27; p < 0.01). A significantly higher median Ci (men 1.39 and women 1.33) was observed in inflamed overweight patients by multivariate analysis (p < 0.05). Serum CRP, as an inflammatory biomarker, was a significant predictor (p = 0.021) of Ci, but its predictive value disappeared after median Ci adjustment of linear regression analysis. Conclusion: Abdominal fat mass, measured by Ci, appears directly linked to inflammation in dialysis. Results support the hypothesis that inflammation in HD patients has pleiotropic effects depending on abdominal body adiposity.

Keywords

Key words, Conicity index, Abdominal fat deposition, Inflammation, Protein energy wasting, Haemodialysis.