CONICITY INDEX PREDICTS CARDIOVASCULAR EVENTS IN HEMODIALYSIS

A Pérez de José, S Abad, A Vega, J Reque, B Quiroga, JM López-Gómez.
Nephrology, University Hospital General Gregorio Marañón

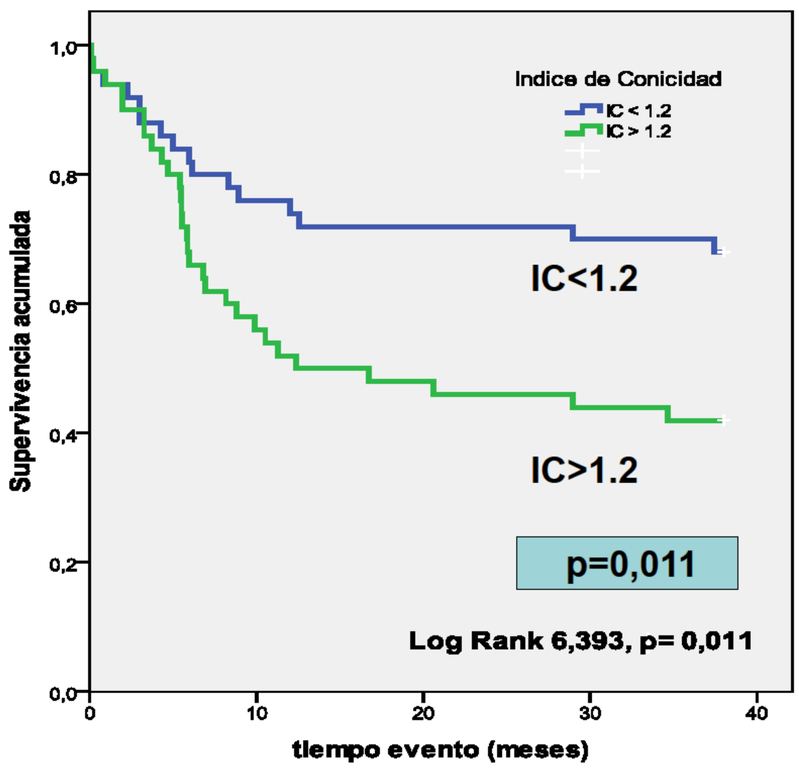
Introduction and aims:

The role of obesity on outcome in hemodialysis (HD) patients remains unclear. Some studies, which measure obesity by body mass index (BMI), suggest that obesity may be beneficial in HD. BMI does not discriminate on the distribution of body fat. Conicity index (**CI**) assesses the degree of abdominal adiposity. The aim of the present study is to determine whether abdominal obesity measured by CI and by fat tissue index (**FTI**) is associated with cardiovascular events in HD patients.

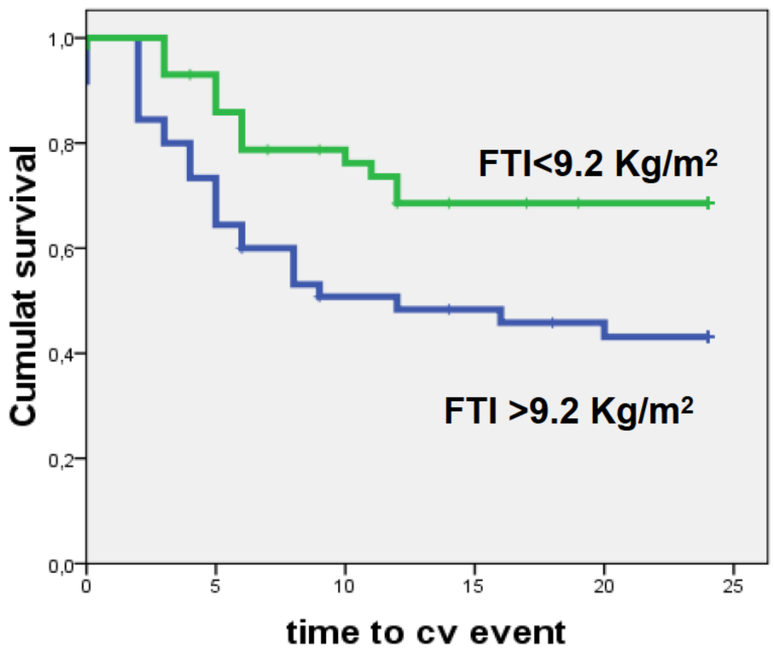
Patients and Methods:

The study group consisted of 100 patients on maintenance HD (60% men, 60 years old, 34% diabetes, 8.9 years in dialysis, kt/v 1.57). Patients were prospectively followed-up for 3 years. Adiposity indicators evaluated were: BMI, CI and FTI which was assessed by bioimpedance spectroscopy. Insulin - resistance was measured with HOMA index. Cardiovascular events and mortality were prospectively collected.
Kaplan Meier analysis was performed to study the effect of increased BMI, CI and FTI in cardiovascular events. We divided patients into 2 groups according to the median of BMI, CI and FTI. Cox regression model was performed to determine which factors were associated with cardiovascular events.

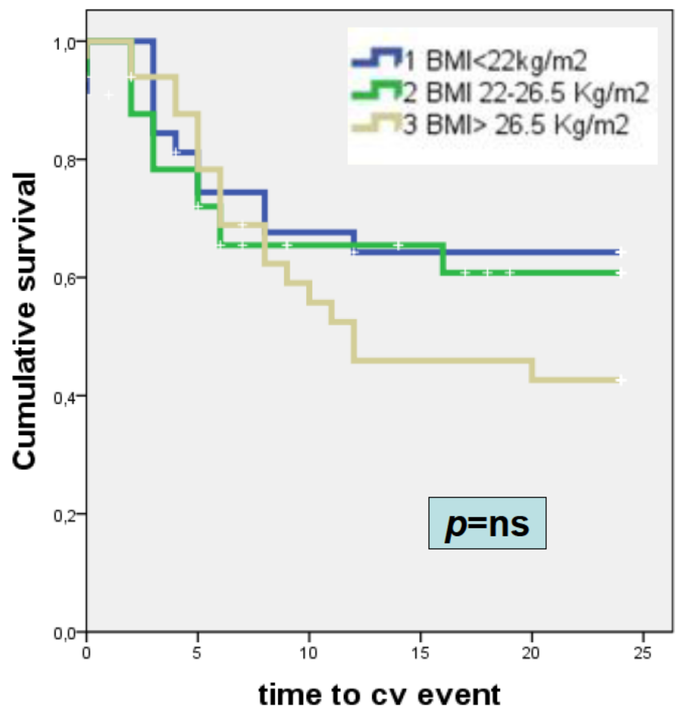
Kaplan Meier Cardiovascular events CI



Kaplan Meier Cardiovascular events FTI



Kaplan Meier Cardiovascular events BMI



Multivariable logistic regression: Mortality FTI

Variables ecuación	*p*	OR	IC 95%
Índice Conicidad	0,037	8,462	1,14- 62,91
Edad	0,051	1,021	1,00- 1,04
Sexo	0,137	0,599	0,305- 1,178

Results:

Cardiovascular events are increased in patients with CI greater than 1.2 (log rank 6,393 , p = 0.011) and FTI greater than 11.5 kg/m2 (Log Rank 10,220 , p < 0.001). Increased BMI is not associated with cardiovascular events. Patients with greater CI and FTI have a significantly higher HOMA index (p = 0.018 and p < 0.001 respectively). Survival at 3 years in patients with CI greater than 1.2 is 42 % and in patients with CI lower than 1.2 is 70 %. In Cox regression model, adjusted for age and sex, CI predicts cardiovascular events in HD (OR 8.46, 95% CI 1.14 to 62.91, p = 0.037) and the so does FTI (OR 2.8, 95% CI 1.2-6.7). Mortality was 35% at 3 years follow-up with no differences between groups (CI greater and lower than 1.2).

Conclusions:

1- Abdominal obesity is associated with cardiovascular events in HD patients.

2- BMI does not predict cardiovascular events.

3- Conicity Index and FTI are independent predictors of cardiovascular events in HD possibly linked to endocrine - metabolic disorders associated with abdominal obesity.

51ERA-EDTA
465--MP
M) Dialysis. M3) Cardiovascular complications in in CKD 5D.
Ana Pérez de José
DOI: 10.3252/pso.eu.51era.2014
Poster presented at: 51 ERA-EDTA CONGRESS AMSTERDAM 2014
PosterSessionOnline.com