Epicardial fatty tissue in association with adipocytokines as prognostic factors of cardiovascular disease in patients with advanced chronic kidney desease and hemodialysis

Tejido graso epicárdico en asociación con adipocitocinas como factores pronósticos de enfermedad cardiovascular en pacientes con enfermedad renal crónica avanzada y hemodiálisis

ARTICLE INFO

Dear Editor,

We read with interest the article by Cano Megías et al., which set out to ascertain whether epicardial adipose tissues (EAT) and mediastinal tissue are related to increased mortality and cardiovascular events in patients with advanced chronic kidney disease and on haemodialysis. They reported that a greater thickness of these adipose tissues is related to increased mortality and that measuring epicardial and mediastinal fatty tissue by synchronised multi-helical computed tomography could be regarded as a cardiovascular prognostic tool in patients.[1]

They highlighted, as the strengths of this study, the use of new technologies, such as synchronised multi-helical computed tomography, which permits the indirect and non-invasive measurement of the accumulation of these adipose tissues in the heart, and established a relationship with the risk of cardiovascular disease.[2]

However, in our opinion, the weak points of the study were the fact that it is single-centre and *post hoc*, whereby the results should be regarded as preliminary and cause-effect relationships cannot be established.[1] Moreover, the study sample size is small, namely 104 patients.

Within the biochemical parameters, it would be important to quantify dysfunctional adipose tissue markers, such as leptin and adiponectin, associated with cardiometabolic risk factors, since other studies have demonstrated that both adipocytokines, measured in serum and in epicardial fatty tissue, increase the risk of cardiovascular events and arterial calcification.[3] Furthermore, other studies have found that the adiponectin-leptin ratio could be regarded as a biomarker for determining the severity and the extent of coronary diseases, and there are even reports that leptin alone would be a serum marker with better predictive capacity.[4]

Epicardial adipose tissue is regarded as an organ with an active metabolic function since it secretes different cytokines that modify cardiac morphology and function. These cytokines, in pathological conditions, play a pro-inflammatory and pro-atherogenic role and are considered to be a risk factor for coronary diseases, inflammation of the myocardium and left ventricular hypertrophy.[5] Since the main cause of death in patients with chronic kidney disease on haemodialysis is cardiovascular disease, it would be interesting to establish prognostic factors to reduce mortality, since there are no specific guidelines established in regard with the thickness of adipose epicardial tissue and the early detection of these conditions in this group of patients.

Conflict of interest

The authors declare that they have no potential conflicts of interest with this letter to the editor.

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