To the Editor:

Prior randomized clinical trials have failed to demonstrate a prognostic benefit of statins in chronic heart failure (CHF).\(^1\),\(^2\) and adding fuel to this controversy, Takano et al (PEARL Study Investigators) have reported a neutral prognostic effect of pitavastatin in 574 patients with CHF.\(^3\)

Despite these neutral findings, evidence coming from observational studies supports the clinical benefit of statins in pre-specified subgroups of patients with HF.\(^4\),\(^5\),\(^6\)\(^7\) A post-hoc analysis of the CORONA trial showed lower risk for the composite primary endpoint of cardiovascular death, nonfatal myocardial infarction or stroke associated with the use of statins in the subgroup of patients with lower serum values of NT-pro brain natriuretic peptide (NT-proBNP <102.7 pmol/L)\(^4\) and high serum values of high-sensitivity C-reactive protein (>2 mg/L).\(^5\)

Moreover, a post-hoc analysis of the PEARL study showed that the prognostic effect of statins varied according to left ventricular function status, with lower risk of cardiovascular mortality and rehospitalization for HF patients with left ventricular ejection fraction (LVEF) ≥30%, but not in those with LVEF <30% (P-value for interaction 0.018).

This hypothesis generating results is what keeps alive the continuous interest in finding the holy grail of statins in CHF. Moreover, a post-hoc analysis of the PEARL study showed that the prognostic effect of statins varied according to left ventricular function status, with lower risk of cardiovascular mortality and rehospitalization for HF patients with left ventricular ejection fraction (LVEF) ≥30%, but not in those with LVEF <30% (P-value for interaction 0.018).

This hypothesis generating results is what keeps alive the continuous interest in finding the holy grail of statins in CHF. Moreover, this association is supported by clinical and experimental evidence suggesting a putative effect of statins on reducing coenzyme Q10 production and, consequently, its deleterious effects on peripheral and cardiac muscle function.\(^7\)

Nevertheless, some methodological issues need to be clarified. For instance, the adjusted analysis in the PEARL study did not include potential confounders such as NT-proBNP and high-sensitivity C-reactive protein (their distribution might be unbalanced in both groups of LVEF). In addition, these 2 factors have been shown to differentially modify the association between statins and outcomes in patients with CHF. Other clinical risk factors, not included in the multivariate analysis such as surrogates for renal function, hemoglobin, comorbidities and concomitant treatments, may also have impacted the magnitude and direction of the reported results.

References


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