Optimising heart failure treatment following cardiac resynchronisation therapy

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Topic(s):
Chronic Heart Failure: Pharmacotherapy

Citation:

BACKGROUND: Device therapy in addition to medical treatment improves prognosis in a subset of patients with heart failure and reduced ejection fraction. However, some patients remain symptomatic or their heart failure even progresses despite cardiac resynchronization therapy (CRT). The aim of the study was to evaluate the proportion of patients who could benefit from optimization of medical therapy by using sacubitril/valsartan, ivabradine or both following CRT implantation.

METHODS: Post-hoc analysis of a single-center, double blind, controlled trial, in which, patients scheduled for CRT were randomized to empiric (n=93) or imaging-guided left ventricular lead placement (n=89). All patients underwent clinical evaluation and blood sampling at baseline and 6 months following CRT implantation. The proportion of patients meeting the indication for sacubitril/valsartan (irrespective of angiotensin-converting enzyme inhibitor or angiotensin 2 receptor blocker dosage) and/or ivabradine in current guidelines was evaluated at baseline and after 6 months.

RESULTS: Of 182 patients with an indication for CRT, 146 (80%) also had an indication for optimization of medical therapy at baseline by adding sacubitril/valsartan, ivabradine or both. Of the 179 survivors at 6 months, 136 (76%) were still symptomatic after device implantation; of these, 51 (38%) patients had an indication for optimization of medical therapy: sacubitril/valsartan in 37 (27%), ivabradine in 7 (5%), and both drugs in 7 (5%) patients. Seven (18%) patients without indication at baseline developed an indication for medical optimization 6 months after CRT implantation.

CONCLUSION: In the present study, 38% of those who remained symptomatic 6 months after CRT implantation were eligible for optimization of medical therapy with sacubitril/valsartan, ivabradine or both. Patients with CRT may benefit from systematic follow-up including evaluation of medical treatment.