ARRHYTHMIAS

β -Blockade in patients with HF and AF

Multiple trials have shown that β -blockers reduce morbidity and mortality in patients with heart failure (HF), and these drugs, therefore, are commonly prescribed to patients with this condition. However, atrial fibrillation (AF) occurs in approximately one-third of patients with HF and, as Rienstra *et al.* point out in their recent paper in *JACC: Heart Failure*, "it is unknown whether β -blockers are as effective in those patients as they are in patients [with HF] with sinus rhythm". Indeed, a meta-analysis undertaken by this group of investigators indicates that these drugs might have little or no beneficial effects on mortality or on the rate of hospitalization for worsening HF in patients with both HF and AF.

All 8,680 patients included in the meta-analysis had HF with reduced ejection fraction (<40%) and were previously assessed in an AF substudy of one of four randomized, placebo-controlled trials. At baseline, 1,677 patients had AF, and 7,003 patients were in sinus rhythm. β -Blockade was associated with a statistically significant reduction in all-cause mortality in patients who were in

sinus rhythm (8.3% vs 13.1% for placebo; OR 0.63, 95% CI 0.54–0.73, $P < 0.00001$), but not in patients with AF (13.5% vs 15.7%; OR 0.86, 95% CI 0.66–1.13, $P = 0.28$) at baseline. Similar trends were shown for HF hospitalizations.

Rienstra and colleagues point out that β -blockade has previously been shown to prevent new-onset and recurrent AF in patients with HF. They also acknowledge that they cannot exclude the possibility that their findings might apply to only some β -blockers. On the basis of their findings, the investigators do not recommend discontinuation of β -blockade in patients with HF and AF. They do, however, suggest that prospective, randomized, controlled trials that specifically assess the prognostic effects of β -blockers in patients with both HF and AF are warranted.

Bryony M. Mearns

Original article Rienstra, M. *et al.* Beta-blockers and outcome in heart failure and atrial fibrillation: a meta-analysis. *JACC Heart Fail.* 1, 21–28 (2013)