Bucindolol, systolic blood pressure, and outcomes in systolic heart failure: a prespecified post hoc analysis of BEST.

BACKGROUND: In the Beta-Blocker Evaluation of Survival Trial (BEST), systolic blood pressure (SBP) ≤ 120 mm Hg was an independent predictor of poor prognosis in ambulatory patients with chronic systolic heart failure (HF). Because SBP is an important predictor of response to β-blocker therapy, the BEST protocol prespecified a post hoc analysis to determine whether the effect of bucindolol varied by baseline SBP.

METHODS: In the BEST, 2706 patients with chronic systolic (left ventricular ejection fraction < 35%) HF and New York Heart Association class III (92%) or IV (8%) symptoms and receiving standard background therapy were randomized to receive either bucindolol (n = 1354) or placebo (n = 1354). Of these, 1751 had SBP ≤ 120 mm Hg, and 955 had SBP > 120 mm Hg at baseline.

RESULTS: Among patients with SBP > 120 mm Hg, all-cause mortality occurred in 28% and 22% of patients receiving placebo and bucindolol, respectively (hazard ratio when bucindolol was compared with placebo, 0.77; 95% confidence interval [CI], 0.59-0.99; P = 0.039). In contrast, among those with SBP ≤ 120 mm Hg, 36% and 35% of patients in the placebo and bucindolol

"Bucindolol, systolic blood pressure, and outcomes in systolic heart failure: a prespecified post hoc analysis of BEST." published by caban on Mon, 08/19/2013 - 12:55pm

Title
Bucindolol, systolic blood pressure, and outcomes in systolic heart failure: a prespecified post hoc analysis of BEST.

Publication Type
Journal Article

Year of Publication
2012

Authors
White, M, Desai, RV, Guichard, JL, Mujib, M, Aban, IB, Ahmed, A, Feller, MA, de Denus, S, Ahmed, A

Journal
Can J Cardiol

Volume
28

Issue
3

Pagination
354-9

Date Published
2012 May

ISSN
1916-7075

Keywords
Adrenergic beta-Antagonists, Age Factors, Aged, Blood Pressure Determination, Chi-Square Distribution, Dose-Response Relationship, Drug, Drug Administration Schedule, Female, Follow-Up Studies, Heart Failure, Systolic, Hospitalization, Humans, Hypertension, Kaplan-Meier Estimate, Male, Middle Aged, Propanolamines, Proportional Hazards Models, Reference Values, Risk Assessment, Severity of Illness Index, Sex Factors, Stroke Volume, Survival Rate, Treatment Outcome

Abstract
BACKGROUND: In the Beta-Blocker Evaluation of Survival Trial (BEST), systolic blood pressure (SBP) ≤ 120 mm Hg was an independent predictor of poor prognosis in ambulatory patients with chronic systolic heart failure (HF). Because SBP is an important predictor of response to β-blocker therapy, the BEST protocol prespecified a post hoc analysis to determine whether the effect of bucindolol varied by baseline SBP.

METHODS: In the BEST, 2706 patients with chronic systolic (left ventricular ejection fraction < 35%) HF and New York Heart Association class III (92%) or IV (8%) symptoms and receiving standard background therapy were randomized to receive either bucindolol (n = 1354) or placebo (n = 1354). Of these, 1751 had SBP ≤ 120 mm Hg, and 955 had SBP > 120 mm Hg at baseline.

RESULTS: Among patients with SBP > 120 mm Hg, all-cause mortality occurred in 28% and 22% of patients receiving placebo and bucindolol, respectively (hazard ratio when bucindolol was compared with placebo, 0.77; 95% confidence interval [CI], 0.59-0.99; P = 0.039). In contrast, among those with SBP ≤ 120 mm Hg, 36% and 35% of patients in the placebo and bucindolol
groups died, respectively (hazard ratio, 0.95; 95% CI, 0.81-1.12; P = 0.541). Hazard ratios (95% CIs; P values) for HF hospitalization associated with bucindolol use were 0.70 (0.56-0.89; P = 0.003) and 0.82 (0.71-0.95; P = 0.008) for patients with SBP > 120 and ≤ 120 mm Hg, respectively.

**CONCLUSION:** Bucindolol, a nonselective β-blocker with weak α(2)-blocking properties, significantly reduced HF hospitalization in systolic HF patients regardless of baseline SBP. However, bucindolol reduced mortality only in those with SBP > 120 mm Hg.

DOI 10.1016/j.cjca.2011.07.004
Alternate Journal Can J Cardiol
PubMed ID 21982425
PubMed Central ID PMC3769783
Grant List

R01 HL085561 / HL / NHLBI NIH HHS / United States
R01 HL097047 / HL / NHLBI NIH HHS / United States
R01-HL085561 / HL / NHLBI NIH HHS / United States
R01-HL097047 / HL / NHLBI NIH HHS / United States