
BACKGROUND: Functional benefit in heart failure due to idiopathic dilated cardiomyopathy has been observed after beta-blockade, but improvement in survival has not been established in a large-scale randomized trial. This was the main objective of the Cardiac Insufficiency Bisoprolol Study (CIBIS).

METHODS AND RESULTS: Six hundred forty-one patients with chronic heart failure of various etiologies and a left ventricular ejection fraction of < 40% entered this placebo-controlled, randomized, double-blind study. Patients were in New York Heart Association functional class III (95%) or IV (5%) at inclusion. All received background diuretic and vasodilator therapy (an angiotensin-converting enzyme inhibitor in 90% of cases). A total of 320 patients was randomized to bisoprolol and 321 to placebo. Mean follow-up was 1.9 years. Bisoprolol was well tolerated without between group difference in premature treatment withdrawals (82 on placebo, 75 on bisoprolol; NS). The observed difference in mortality between groups did not reach statistical significance: 67 patients died on placebo, 53 on bisoprolol (P = .22; relative risk, 0.80; 95% confidence interval, 0.56 to 1.15). No significant difference was observed in sudden death rate (17 on placebo, 15 on bisoprolol) or death related to documented ventricular tachycardia or fibrillation (7 on placebo, 4 on bisoprolol). Bisoprolol significantly improved the functional status of the patients; fewer patients in the bisoprolol group required hospitalization for cardiac decompensation (90 on placebo versus 61 on bisoprolol, P < .01), and more patients improved by at least one New York Heart Association functional class (48 on placebo versus 68 on bisoprolol, P = .04) by the end of follow-up period.

CONCLUSIONS: These results confirm previous trials evidence that a progressively increasing dose of beta-blocker in severe heart failure confers functional benefit. Subgroup analysis suggested that benefit from beta-blockade therapy was greater for those with nonischemic cardiomyopathy. However, improvement in survival while on beta-blockade remains to be demonstrated.