CIBUS-II Investigators and Committees. The cardiac insufficiency Bisoprolol study II (CIBUS-II): a randomized trial. 

BACKGROUND: In patients with heart failure, beta-blockade has improved morbidity and left-ventricular function, but the impact on survival is uncertain. We investigated the efficacy of bisoprolol, a beta1 selective adrenoceptor blocker in decreasing all-cause mortality in chronic heart failure.

METHODS: In a multicentre double-blind randomised placebo-controlled trial in Europe, we enrolled 2647 symptomatic patients in New York Heart Association class III or IV, with left-ventricular ejection fraction of 35% or less receiving standard therapy with diuretics and inhibitors of angiotensin-converting enzyme. We randomly assigned patients bisoprolol 1.25 mg (n=1327) or placebo (n=1320) daily, the drug being progressively increased to a maximum of 10 mg per day. Patients were followed up for a mean of 1.3 years. Analysis was by intention to treat.

FINDINGS: CIBIS-II was stopped early, after the second interim analysis, because bisoprolol showed a significant mortality benefit. All-cause mortality was significantly lower with bisoprolol than on placebo (156 [11.8%] vs 228 [17.3%] deaths with a hazard ratio of 0.66 (95% CI 0.54-0.81, p<0.0001). There were significantly fewer sudden deaths among patients on bisoprolol than in those on placebo (48 [3.6%] vs 83 [6.3%] deaths), with a hazard ratio of 0.56 (0.39-0.80, p=0.0011). Treatment effects were independent of the severity or cause of heart failure.

INTERPRETATION: Beta-blocker therapy had benefits for survival in stable heart-failure patients. Results should not, however, be extrapolated to patients with severe class IV symptoms and recent instability because safety and efficacy has not been established in these patients.