
**OBJECTIVES:** The purpose of this study was to determine whether digoxin is effective in patients with chronic, stable mild to moderate heart failure.

**BACKGROUND:** Digoxin has been a traditional therapy in heart failure, but methodologic limitations in earlier studies have prevented definitive conclusions regarding its efficacy.

**METHODS:** Withdrawal of digoxin (placebo group, n = 46) or its continuation (digoxin group, n = 42) was performed in a prospective, randomized, double-blind, placebo-controlled multicenter trial of patients with chronic, stable mild to moderate heart failure secondary to left ventricular systolic dysfunction who had normal sinus rhythm and were receiving long-term treatment with diuretic drugs and digoxin.

**RESULTS:** Patients withdrawn from digoxin therapy showed worsened maximal exercise capacity (median change in exercise time -96 s) compared with that of patients who continued to receive digoxin (change in exercise time +4.5 s) (p = 0.003). Patients withdrawn from digoxin therapy showed an increased incidence of treatment failures (p = 0.039) (39%, digoxin withdrawal group vs. 19%, digoxin maintenance group) and a decreased time to treatment failure (p = 0.037). In addition, patients who continued to receive digoxin had a lower body weight (p = 0.044) and heart rate (p = 0.003) and a higher left ventricular ejection fraction (p = 0.016).

**CONCLUSIONS:** These data provide strong evidence of the clinical efficacy of digoxin in patients with normal sinus rhythm and mild to moderate chronic heart failure secondary to systolic dysfunction who are treated with diuretics.