It is unclear whether carvedilol and nebivolol will produce different effects on platelet function and prothrombotic state in heart failure (HF). Thus, we compared their effects on these functions in patients with nonischemic HF. We included 61 patients with symptomatic nonischemic HF having ejection fraction ≤40%. The patients were randomized to carvedilol (n = 31) or nebivolol (n = 30). Analyses were made at baseline, 3, and 6 months. At 6 months, mean platelet volume (MPV) was significantly lowered by both carvedilol and nebivolol therapy. However, MPV tended to be lower in the carvedilol group (7.7 ± 1.0 vs 8.0 ± 0.7 fL, P = .05). Fibrinogen and d-dimer levels were significantly decreased in both groups. Carvedilol and nebivolol have similar beneficial effects on platelet function and prothrombotic state in patients with nonischemic HF.