
**BACKGROUND:** Treatment with angiotensin-converting-enzyme (ACE) inhibitors reduces mortality among survivors of acute myocardial infarction, but whether to use ACE inhibitors in all patients or only in selected patients is uncertain.

**METHODS:** We screened 6676 consecutive patients with 7001 myocardial infarctions confirmed by enzyme studies. A total of 2606 patients had echocardiographic evidence of left ventricular systolic dysfunction (ejection fraction, < or = 35 percent). On days 3 to 7 after infarction, 1749 patients were randomly assigned to receive oral trandolapril (876 patients) or placebo (873 patients). The duration of follow-up was 24 to 50 months.

**RESULTS:** During the study period, 304 patients (34.7 percent) in the trandolapril group died, as compared with 369 (42.3 percent) in the placebo group (P = 0.001). The relative risk of death in the trandolapril group, as compared with the placebo group, was 0.78 (95 percent confidence interval, 0.67 to 0.91). Trandolapril also reduced the risk of death from cardiovascular causes (relative risk, 0.75; 95 percent confidence interval, 0.63 to 0.89; P = 0.001) and sudden death (relative risk, 0.76; 95 percent confidence interval, 0.59 to 0.98; P = 0.03). Progression to severe heart failure was less frequent in the trandolapril group (relative risk, 0.71; 95 percent confidence interval, 0.56 to 0.89; P = 0.003). In contrast, the risk of recurrent myocardial infarction (fatal or nonfatal) was not significantly reduced (relative risk, 0.86; 95 percent confidence interval, 0.66 to 1.13; P = 0.29).

**CONCLUSIONS:** Long-term treatment with trandolapril in patients with reduced left ventricular function soon after myocardial infarction significantly reduced the risk of overall mortality, mortality from cardiovascular causes, sudden death, and the development of severe heart failure. That mortality was reduced in a randomized study enrolling 25 percent of consecutive patients screened should encourage the selective use of ACE inhibition after myocardial infarction.