

CASTLE-AF Trial: catheter ablation improves outcomes in patients with AF and Heart Failure

The Catheter Ablation versus Standard conventional Treatment in patients with Left ventricular dysfunction and Atrial Fibrillation (CASTLE-AF) trial examines the effect of catheter ablation on all-cause mortality and hospitalization rates in atrial fibrillation (AF) patients with left ventricular dysfunction, compared to state-of-the art conventional treatment recommended by the American Heart Association and the European Society of Cardiology. More than 3000 patients were screened and 397 patients with symptomatic paroxysmal or persistent AF and heart failure with left ventricular ejection fraction of less than 35% were randomized to radiofrequency catheter ablation or conventional drug treatment consisting of rhythm or rate control. All patients had ICDs with ability to continuously monitor AF. During the median follow-up of

37.8 months, the rate of the primary endpoint of composite of all-cause mortality and unplanned hospitalization for worsening heart failure was significantly lower in the ablation group (28.5%) versus the control group (44.6%) (hazard ratio [HR], 0.62; 95% confidence interval [CI], 0.43–0.87 p=0.007). The secondary endpoint of all-cause mortality rate was 13.4% in catheter ablation arm compared with 25% with conventional treatment arm (HR, 0.53; 95% CI, 0.32–0.86; p=0.011). The other secondary endpoint of heart failure hospitalization rate was 20.7% with catheter ablation versus 35.9% with conventional treatment (0.56; 95% CI, 0.37-0.83; P=0.004).