Surgical Ablation of Atrial Fibrillation in Patients With Congestive Heart Failure

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Background
Congestive heart failure (CHF) and atrial fibrillation (AF), both of which cause morbidity and mortality, are mutually promoting diseases. We aimed to evaluate surgical AF ablation in CHF.

Methods and Results
Among 212 patients (age 69 ± 8.8 years, 87% with persistent AF) undergoing concomitant left atrial (LA) ablation, 79 (37.3%) presented CHF (n = 62 with a left ventricular ejection fraction [LVEF] 0.31-0.45, n = 17 with an LVEF ≤ 0.30). Patients with CHF were similar to controls regarding AF duration (61 ± 65.1 months vs. 54 ± 67.2 months, not significant [NS]), LA diameter (49 ± 7.5 mm vs. 50 ± 9.2 mm, NS), and heart rate (78 ± 18.4 min⁻¹ vs. 81 ± 21.3 min⁻¹, NS), but they required more circulatory support (17.7% vs. 1.5%, P < .001) and a longer intensive care unit stay (6 ± 9.5 days vs. 4 ± 10.5 days, P = .032). At follow-up after 13 ± 7.3 months, 42 patients (66%) with CHF and 81 controls (74%, NS) were in sinus rhythm (SR) (55% and 64% without antiarrhythmic drugs, respectively, NS). Univariate and logistic regression analysis revealed that AF duration and LA diameter predicted rhythm outcome but not CHF. In patients with an LVEF of 0.30 or less, SR conversion significantly improved LVEF, New York Heart Association class, and Minnesota Living with Heart Failure score. Kaplan-Meier estimates suggested superior survival of patients with stable SR (100% vs. 73%, log-rank P < .05).

Conclusions
If patients presenting with CHF and AF require cardiac surgery, concomitant AF ablation should be considered, especially if left ventricular function is severely impaired. Key Words Cardiac surgery, concomitant ablation, rhythm control.

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