Safety and Efficacy of Catheter Ablation of Atrial Fibrillation in Octogenarians: Insights from the UC San Diego AF Ablation Registry

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Background: Catheter ablation improves outcomes in symptomatic atrial fibrillation (AF) patients. However, its safety and efficacy in the very elderly (≥80 years old) is not well described.

Objective: To evaluate the safety and efficacy of catheter ablation of atrial fibrillation in the very elderly.

Methods: We performed a retrospective study of all patients who underwent radiofrequency catheter ablation enrolled in the University of California, San Diego AF Ablation Registry. The primary outcome was freedom from atrial arrhythmias on or off antiarrhythmic drugs (AAD).

Results: Of 847 patients, 42 (5.0%) were 80 years of age or greater with a median age of 81.5 (80,82.3) and 805 (95.0%) were less than 80 years of age with a median age of 64.4 (57.6,70.2). Among those who were ≥80 years old, 29 were undergoing de novo ablation (69.0%) whereas in the younger cohort, 518 (64.5%) were undergoing de novo ablation (p=0.548). There were no statistically significant differences in fluoroscopy (p=0.406) or procedure times (p=0.076), antiarrhythmic drug use (p=0.611), or procedural complications (p=0.500) between groups. After multivariable adjustment, there were no statistically significant differences in recurrence of atrial arrhythmias on or off AAD (Adjusted Hazard Ratio (AHR) 0.75 (95% CI 0.45-1.23); p=0.252) (Figure 1), all-cause hospitalizations [AHR 0.86 (95% CI 0.46-1.60); p=0.626] or all-cause mortality [AHR 4.48 (95% CI 0.59-34.07); p=0.147] between octogenarians and the younger cohort.
**Conclusion:** In this registry analysis, catheter ablation of AF appears similarly effective and safe in patients 80 years or older when compared to a younger cohort.

![Image](image.png)

**Figure 1:** Kaplan Meier plot of recurrence of atrial arrhythmias (atrial fibrillation, atrial flutter and atrial tachycardia). Patients who are 80 years of age or greater are compared with patients who are younger than 80 years of age.