Efficacy of cryoballoon ablation for atrial fibrillation in a geriatric population

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Funding Acknowledgement: Type of funding sources: None.

Background: Cryoballoon pulmonary vein isolation (cryoPVI) is well-established for paroxysmal atrial fibrillation (AF) but its value in persistent AF is less clear. In particular, its efficacy in cardiogeriatric patients (≥75 years) is unknown. Age represents an important modifier of AF progression and is a risk-factor for AF recurrence.

Methods: We conducted a prospective, single-center study to analyze efficacy and safety of cryoPVI in cardiogeriatric patients stratified according to AF entity. Maximum follow-up was 24 months. Efficacy endpoint was symptomatic AF relapse after 90-day blanking period.

Results: We included 668 patients. Of these 218 were ≥75 years old. Paroxysmal AF was present in 400 and persistent AF in 268 patients. By means of cox-regression analysis we found age as the only independent factor influencing AF recurrence in the overall cohort (P=0.034). This effect was carried by patients with persistent AF (P=0.006). At 24 months, the recurrence rate was highest in patients with persistent AF and age ≥75 years (57%; P=0.0004).

Conclusion: Cardiogeriatric patients with persistent AF undergoing cryoPVI had higher rates of AF recurrence compared to elderly patients with paroxysmal AF or younger patients. Against this background we assume, that pulmonary-vein dependent AF may be less frequently encountered among patients ≥75 years with persistent AF.

![Figure 1](https://academic.oup.com/eurheartj/article/43/Supplement_2/ehac544.2545/6746053)