

ARRHYTHMIAS

AF RECURRENCE AFTER CRYOABLATION

Little is known about the prognostic significance of the recurrence of atrial fibrillation (AF) early (within the first 3 months) after cryoballoon ablation, or whether reablation of this early recurrence of AF (ERAF) within the first 3 months after the initial procedure is beneficial for patients. A prespecified substudy of the prospective, multicentre, randomized, controlled STOP AF trial was designed to assess these issues in the trial participants who had undergone cryoballoon ablation.

Of the 163 STOP AF participants who underwent cryoballoon ablation, roughly half (52%) experienced recurrent AF during the first 3 months of follow-up after the initial procedure. Most of these patients with ERAF (86%) experienced their recurrent AF within 1 month of the initial procedure. Of all the candidate variables assessed, only male sex was found to be significantly associated with risk of ERAF (HR 2.18, 95% CI 1.03–4.61, $P=0.04$). Reablation was performed within 3 months of the initial ablation procedure in 30 of the 84 patients who had ERAF.

Recurrence of AF 3–12 months after the initial cryoballoon ablation procedure occurred in 25% of all patients, and was significantly associated with current tobacco use (HR 3.17, 95% CI 1.64–6.10, $P=0.0006$). Late recurrence of AF (LRAF) was more likely to occur in patients who had experienced ERAF than in patients who had not (56% of patients with ERAF, but who did not undergo reablation, or 37% of all patients who experienced ERAF, versus 13% of patients who did not experience ERAF). Among patients who experienced ERAF, those who underwent early reablation were much less likely to experience LRAF than those who did not (3% versus 56%).

In their study report, the investigators say that “although recent studies have confirmed the predictive value of ERAF after radiofrequency catheter ablation, to the best of our knowledge this is the first time early and late recurrence has been rigorously examined in a trial of cryoballoon ablation ... Early reablation is associated with an excellent long-term freedom from recurrent AF.” They point out, however, that “nearly half of patients with ERAF did not develop late recurrence. Given the potential for late cure, risks of early reablation should be balanced against a conservative strategy.”

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Original article Andrade, J. G. *et al.* Incidence and significance of early recurrences of atrial fibrillation after cryoballoon ablation: insights from the multicenter STOP AF trial. *Circ. Arrhythm. Electrophysiol.* doi:10.1161/CIRCEP.113.000586