Abstract: P455

Predictors for recurrence of atrial fibrillation following ablation of atrial fibrillation within the blanking period: Insights from the AXAFA trial

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Background
Recurrent AF within the blanking period (first 3 months post-ablation) is usually neglected or not considered in treatment, but there is evidence that it is an independent predictor for long-term recurrence of AF and poor outcome.

Purpose
We identified predictors for recurrent AF within the first 3 months post-ablation in the AXAFA – AFNET 5 trial patients.

Methods
The AXAFA-AFNET 5 trial was a prospective, open-label, multi-center study with blinded outcome assessment, randomizing 674 patients 1:1 to apixaban or VKA treatment (target INR 2-3) undergoing a first AF ablation. 588 patients who met the inclusion criteria for this analysis (1. sinus rhythm after ablation, 2. completed 3 months follow-up (mean 93±11 days), and 3. ablation energy used either cryoballoon, radiofrequency or laser) were analyzed for predictors of recurrent AF. AF was defined as the first occurrence of any episode of paroxysmal, persistent, long-lasting or permanent AF, not considering atrial high rate episodes or atrial flutter. All patients with clinical recurrences of AF were included; additionally, patients underwent systematic 24-hour Holter monitoring at the end of the blanking period. A multivariable Cox-regression model was used to identify factors independently associated with recurrent AF during the blanking period.

Results
The mean age of 155 patients with recurrent AF was 65±9 years (no recurrence (N=433) 63±9; P=0.066), mean CHA2DS2-VASc score was 1.6±0.9 (no recurrence 1.4±0.7; P=0.012) and 61% (N=94) were male (no recurrence 69% (N=298); P=0.074). During the blanking period, 155 (26%) patients experienced AF recurrence post-ablation (median = day 15, 95% CI 10-25). More than half of all AF recurrences during the blanking period occurred within 14 days post-ablation(N=83, 54%; Figure 1A). In a multivariable Cox-regression model, history of stroke (HR 1.9 (95% CI 1.1-3.3; P=0.016), coronary artery disease (HR 1.7 (95% CI 1.1-2.7); P=0.02; Figure 1B), pulmonary vein antrum isolation (HR 1.9 (95% CI 1.1-3.2); P=0.02; Figure 1C) compared to segmental ostial isolation or other types of ablation (WACA, CFAE), and the need for
cardioversion during procedure (HR 1.9 (95% CI 1.3-2.8); P=0.001; Figure 1D) were predictors for recurrent AF after ablation.

Conclusions

Recurrent AF occurred among 155/588 patients in AXAFA with sinus rhythm at the end of a first AF ablation procedure. In more than 50% of all patients, AF recurrence was detected within 14 days post-ablation. We identified clinical (history of stroke and present coronary artery disease) and procedural-related (isolation technique and need for cardioversion during the procedure) predictors for recurrent AF in our follow-up period 3 months post-ablation. Further evidence for recurrent AF within the first 3 months will help to elucidate the clinical importance of reconsidering the concept of the blanking period.

![Graph A](image1.png)

![Graph B](image2.png)

![Graph C](image3.png)

![Graph D](image4.png)