

Which one is the best periprocedural antithrombotic strategy for atrial fibrillation catheter ablation - a real-world comparison

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INTRODUCTION

- Atrial Fibrillation (AF) catheter ablation carries high bleeding and thromboembolic risks, requiring a detailed assessment of overall risk-benefit profile regarding antithrombotic strategy.
- Vitamin K Anticoagulant (VKA) and Non-Vitamin K Antagonist Oral Anticoagulant (NOAC) have been used in the latest years in this setting, and with different interruption protocols periprocedural.

AIM: evaluate the rate of acute adverse events (AAE) and compare them according to antithrombotic strategy used periprocedural, in a real-world basis.

METHODS

- Single-center retrospective study, including adult patients admitted to first AF catheter ablation, from 2004 to 2020.
- Different antithrombotic strategies (anticoagulation with VKA uninterrupted, anticoagulation with NOAC uninterrupted, no therapy or antiaggregation/interrupted ACO) were compared concerning the rate of any clinically relevant AAE; the composite of major AAE (hemopericardium and stroke/transient ischemic attack [TIA]) and minor AAE associated with vascular access.
- Descriptive statistics and logistic regression were used to compare groups according to the antithrombotic strategy with an alpha level of 0,05.

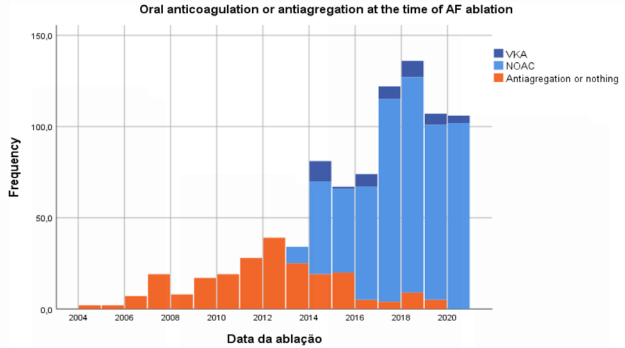
RESULTS

- Among the 868 patients included (mean age 59±12 yo, 67,5% [n=586] men), pulmonary vein isolation was performed under uninterrupted anticoagulation in 640 (73,7%), of which 595 patients with NOAC (68,5%) and 45 with VKA (5,2%).
- AF was paroxysmal, persistent and long-standing persistent in 63,4% (n=550), 21,4%(n=185) and 15,4%(n=133) patients, respectively. Mean CHADS-VASc score was 1,86±1,48. Over time there was a shift in the distribution of the type of antithrombotic therapy used, consistent with changes in recommendations (Graph 1.).
- The composite outcome occurred in 6,8% (n=62), including hemopericardium in 1,8% (n=16), stroke/TIA in 0,7% (n=6) and events related to vascular access in 1,4% (n=13) [Table 1.].

- No anticoagulation therapy or antiaggregation/interrupted ACO was more associated to the outcome, driven by major AAE, although the difference did not meet statistical significance (p=0,06) [Table 1.].
- No difference was found between VKA and NOAC group.
- Additionally, there was no difference in the incidence of hemorrhagic AAE since the implementation of an uninterrupted anticoagulation strategy periprocedural.

Table 1. - Any clinically relevant acute adverse events periprocedural of AF ablation, according antithrombotic strategy.

	VKA uninterrupted (N=45)	NOAC uninterrupted (N=595)	Antiaggregation/no therapy/interrupted (N=228)
Any clinically relevant acute adverse event	3 (6,7%)	36 (6,1%)	21 (9,2%)
Major acute adverse event	2 (4,4%)	21 (3,5%)	14 (6,1%)
Stroke / transient ischemic attack	0	5 (0,8%)	1 (0,4%)
Hemopericardium	2 (4,4%)	8 (1,3%)	7 (3,1%)
Vascular access related events	1 (2,2%)	6 (1,0%)	5 (2,2%)



Graph 1. Prevalence of antithrombotic therapies in at the time of AF ablation, along the years.

CONCLUSIONS

- In our population of patients submitted to AF catheter ablation, an uninterrupted anticoagulation strategy is associated with lower rate of AAE, either with VKA or NOAC.
- Our real-world results are reassuring of the benefit of an uninterrupted strategy, and consistent with recent controlled trials.