

# ATRIAL FLUTTER ABLATION: CAN WE FIND PREDICTORS OF ARRHYTHMIC RECURRENCE?

Beatriz Valente Silva, Tiago Rodrigues, Nelson Cunha, Joana Brito, Pedro Alves da Silva, Sara Couto Pereira, Pedro Silvério António, Beatriz Garcia, Margarida Martins, Catarina Oliveira, Patrícia Teixeira, Afonso Nunes Ferreira, Nuno Cortez-Dias, Fausto J. Pinto, João de Sousa - Santa Maria University Hospital (CHULN), CAML, CCUL, Lisbon School of Medicine, Universidade de Lisboa, Cardiology Department, Lisbon, Portugal

## INTRODUCTION

Cavotricuspid isthmus ablation (CTA) is the 1<sup>st</sup> line treatment for rhythm control in typical atrial flutter, but the burden of arrhythmic recurrence after CTA is unknown.

## PURPOSE

To identify **PREDICTORS OF ARRHYTHMIC RECURRENCE AFTER CTA**

## METHODS

- Retrospective study of patients submitted to CTA between 2015 and 2019
- Comprising **3 groups**:

**Group I** – patients with lone AFL

**Group II** – patients with AFL and prior AF submitted to CTA only

**Group III** – patients with AFL and prior AF submitted to IVP and CTA

Clinical records, Holter and/or 7-day event loop recorder were performed during the follow-up to determine the arrhythmic recurrence (defined as: typical atrial flutter and atrial fibrillation).

Kaplan Meier curves were used to estimate the risk of events and the groups were compared using uni and multivariate Cox regression.



**476 patients (66 ± 12 years, 80% males) underwent CTA**

**Group I** – 284 patients (60%)

**Group II** – 109 patients (23%)

**Group III** – 83 patients (17%)

Baseline characteristics were similar between groups, except for age with group I being older (68±12, 67±11, 61±11, p<0.03)

## RESULTS

269 patients (58%) were under anti-arrhythmic therapy

- 58 patients suspended before and 8 patients suspended after anti-arrhythmic therapy

Mean follow-up of 2.8 years – **ARRHYTHMIC RECURRENCE**:

- Typical atrial flutter – 17 patients (4%)
- Atypical atrial flutter – 35 patients (7%)
- Atrial fibrillation – 118 patients (25%)

Predictors of **ARRHYTHMIC RECURRENCE** on univariate analysis:

- Peripheral arterial disease (PAD, p=0.024)
- Cerebrovascular disease (p=0.049)

- Obstructive sleep apnea (OSA, p=0.005) → INDEPENDENT PREDICTOR (HR 0.57; 95%CI 0.368-0.882, p=0.012)
- Thyroid dysfunction (p=0.005) → INDEPENDENT PREDICTOR (HR 0.59; 95%CI 0.380-0.913, p=0.018)

→ The withdrawn of anti-arrhythmic therapy did not seem to predict arrhythmic recurrence.

In **Group I**: PAD (p<0.001), OSA (p=0.03), thyroid dysfunction (p=0.038) and higher CHADsvASC (p=0.003) were predictors of **ARRHYTHMIC RECURRENCE**. Only PAD (HR 0.434; 95%CI 0.196-0.964, p=0.04) and OSA (HR 0.46; 95%CI 0.249-0.849, p=0.013) were independent predictors.

In atypical AFL, only a body mass index (p=0.005) was predictor of AR (more frequent with BMI 25-30). We did not find predictors of recurrence of typical AFL.

In patients with AF we did not find predictors of AR.

## CONCLUSION

AF is the most frequent recurrent arrhythmia after CTA, being thyroid dysfunction, OSA and PAD predictors of recurrence. The withdrawn of anti-arrhythmic therapy did not predict the recurrences.



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