

## Typical atrial flutter ablation and predictors of events in the follow-up

Alves Da Silva P.; Rodrigues T.; Cunha N.; Brito J.; Couto-Pereira S.; Nunes-Ferreira A.; Silverio-Antonio P.; Valente-Silva B.; Barreiros C.; Carpinteiro L.; Cortez-Dias N.; Pinto F.J.; De Sousa J.

Santa Maria University Hospital CHLN Lisbon Academic Medical Centre, Lisbon, Portugal

**Funding Acknowledgements:** Type of funding sources: None.

**Introduction:** Cavotricuspid isthmus ablation (CTA) is considered the main treatment for rhythm control in patients (pts) with typical atrial flutter (AFL). Although there is an established risk for embolic events in atrial fibrillation (AF), the results are not standardized for typical AFL. Currently, anticoagulation in AFL pts submitted to ablation is not consensual.

**Purpose:** To determine the incidence and predictors of major cardiovascular events (MACE) of pts submitted to CTA of typical AFL.

**Methods:** Single-center retrospective study of patients (pts) submitted to CTA between 2015 and 2019, comprising three groups: I – pts with lone AFL; II – patients with AFL and prior AF submitted to CTA only; and III – patients with AFL and prior AF submitted to IVP and CTA. Clinical records were analyzed to determine the occurrence of MACE during the long-term follow up, defined as death (of cardiovascular or unknown cause), stroke, clinically relevant bleed or hospitalization due to heart failure or arrhythmic events. Kaplan Meier survival curves were used to estimate the risk of events and the groups were compared using uni- and multivariate Cox regression analyses

**Results:** A total of 476 pts ( $66 \pm 12$  years, 80% males) underwent CTA: group I – 284 pts (60%), II – 109 pts (23%) and III – 83 pts (17%). Baseline characteristics were similar between groups, except for age with group I pts being older ( $68 \pm 12$ ,  $67 \pm 11$ ,  $61 \pm 11$ ,  $p < 0.03$ ).

At presentation, the majority of the pts had palpitations (70.4%) and mild symptoms (70.8%). HTN and dyslipidemia were the most frequent cardiovascular risk factors, 69.5% and 53.9%, respectively, and heart failure was not frequent (27.7%) with only 5.4% of pts with LVEF  $< 30\%$  and 12.4% with left atrium  $> 50\text{ml/m}^2$ .

During a mean follow-up of 2.8 years, the incidence of MACE events was 102 (21.4%). Regarding MACE components: 54 pts (11.5%) died from cardiovascular death, 20 pts had stroke (4.5%), 13 (3.8%) had a clinically relevant bleeding event, and 51 pts (11.4%) were hospitalized due to heart failure or arrhythmic events.

On univariate analysis, arterial peripheral disease ( $p = 0.018$ ), HTN ( $p = 0.046$ ), chronic kidney disease ( $p < 0.001$ ), chronic pulmonary disease ( $p = 0.0024$ ), heart failure ( $p < 0.001$ ), cerebrovascular disease ( $p = 0.029$ ), body mass index ( $p = 0.01$ ), age ( $p < 0.001$ ), CHADsVASC score ( $p < 0.001$ ) and left atrial diameter ( $p = 0.01$ ) were associated with the occurrence of MACE.

However only age (HR 1.073; 95%CI 1.03-1.06,  $p < 0.001$ ) and chronic kidney disease (HR 0.37; 95%CI 0.186-0.765,  $p = 0.007$ ) were independent predictors of major events.

**Conclusions:** In our cohort of pts with AFL, stroke and bleeding occurred in a minority of pts. Age and chronic kidney disease predicted MACE events during follow-up.

Abstract Figure. CKD as FLA predictor

