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Introduction

- The **cornerstone of atrial fibrillation (AF) catheter ablation (CA)** is the complete pulmonary veins isolation (PVI), applying circular lesions around their antrum.
- In **persistent and long-standing persistent AF**, more extensive ablation has been advocated, that may include empirical additional linear lesions in the left atrium (LAL).
- Moreover, cavo-tricuspid isthmus ablation (CTA) may be performed **even in the absence of previous atrial flutter (AFL)**.
- However, the benefit versus PVI alone, during the first procedure, is not demonstrated.

Purpose

To compare **arrhythmia-free survival** between **PVI alone** versus **PVI complemented with LAL and/or CTA**.

Methods

- Prospective single-center study**



2004 to 2018

Population: pts with AF submitted to a first point-by-point CA, with or without LAL or CTA.

Exclusion: pts with atypical flutter.

Follow-up: Holter/event monitors periodically at 6 and 12 months and then annually until 5 years of follow-up.

Primary endpoint: arrhythmia-free survival (absence of documentation of more than 30 seconds of AF, flutter or atrial tachycardia).

Statistical analysis: Cox regression and Kaplan-Meier survival were used to compare the success of ablation as a function of the clinical type of AF.

Results



293 pts

- Sex:** 64.5% males
- Age:** 58±13 years-old



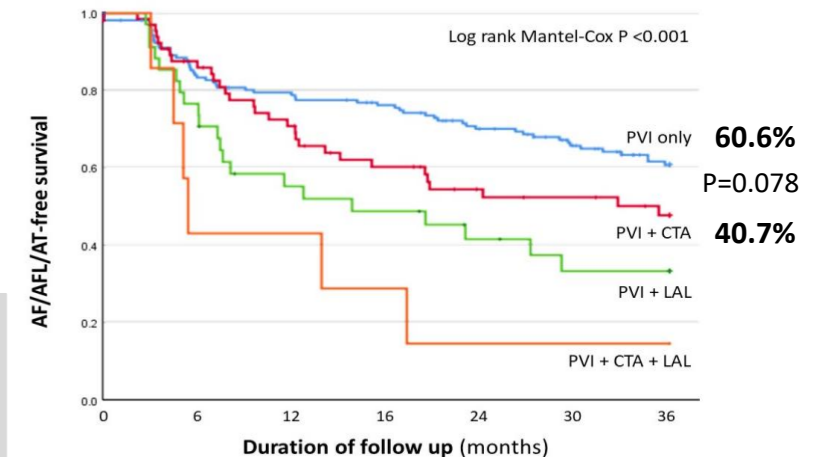
The indications for CA:

- Paroxysmal AF - 60.1% (n=176)
- Persistent - 28.3% (n=83)
- Long-standing persistent - 1.6% (n=34)

Typical atrial flutter - 38.8% (n=106)

Procedures	N (%)
PVI	293 (100%)
LAL	47 (16%)
CTA	83 (28.3%)

The **12 and 36-months** CA success rate were **70.8% and 52.9%**, and there were significant differences depending on the ablation strategy.



The risk of AF recurrence:

- **2 times superior** in pts submitted to PVI and LAL strategy (HR: 2.27; IC95% 1.38-3.75; P=0.001).
- **4 times superior** in those with a strategy with PVI+CTA+LAL (HR: 4.17; IC95% 1.79-9.72; P=0.001).

Conclusion

Treating AF with CA therapy using PVI alone was superior to a strategy with combined LAL and to CTA and LAL.
LAL strategy seemed to adversely affect the long-term success rate.