

Comparison of procedural workflow, safety, and one-year efficacy of catheter ablation of atrial fibrillation using radiofrequency and pulsed-field energy

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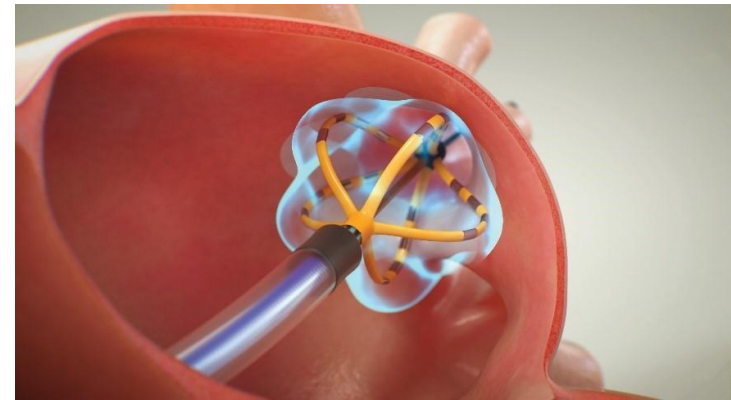


Introduction

- Pulsed-field ablation (PFA): Emerging technology for AF ablation.
- Radiofrequency ablation (RFA): Established method.
- Study Aim: Single-center comparison of PFA vs RFA.

Study Methods

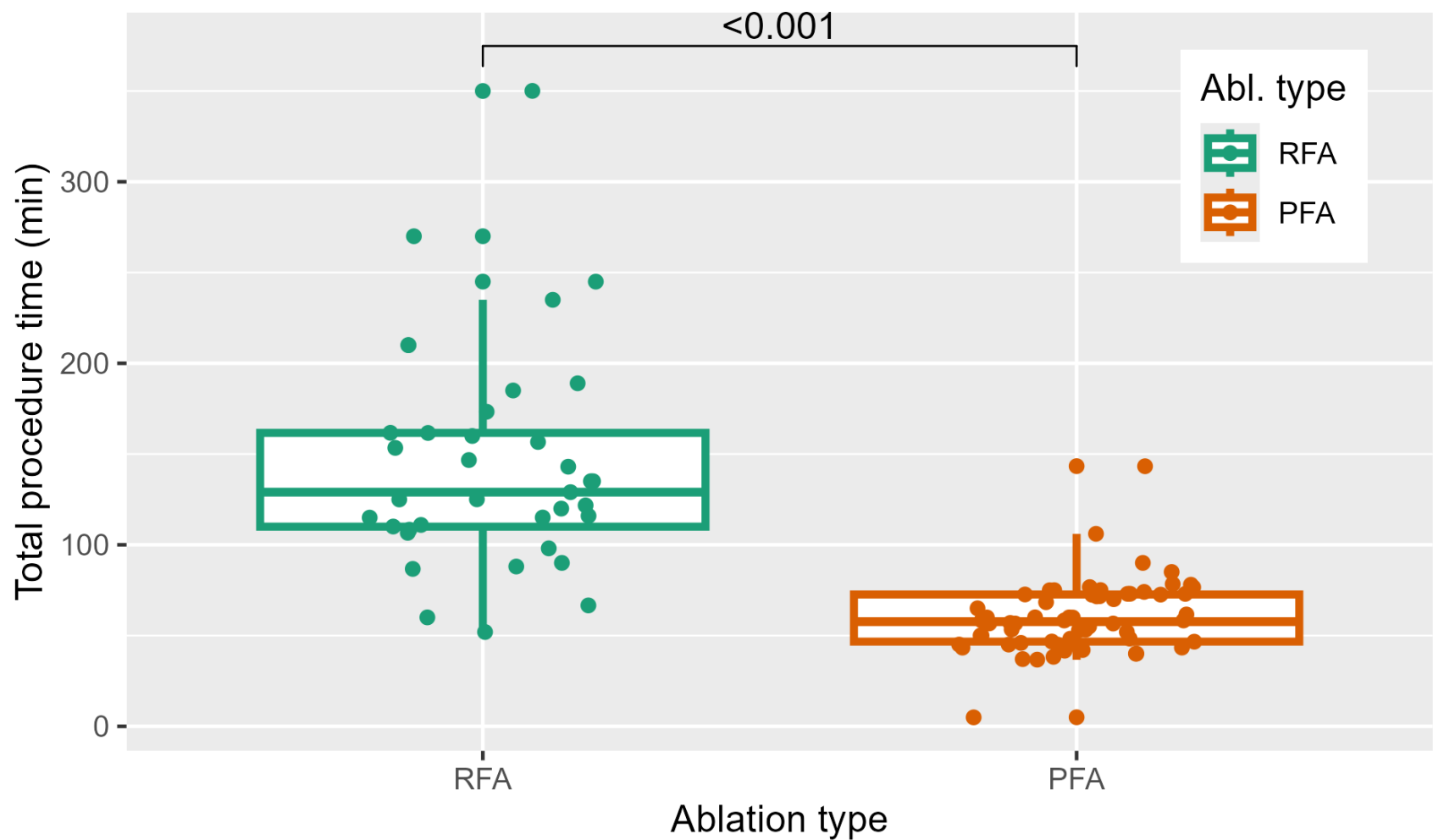
- Single center, non-randomized, cohort study.
- All consecutive patients were enrolled
- 547 patients: 390 PFA, 158 RFA.
- Paroxysmal AF: Only PVI.
- Non-paroxysmal AF: Posterior wall and MI isthmus in PFA group. In the RF group, additional ablations beyond PVI on the operator's discretion.
- 24-hour Holter monitoring and clinical check-up 3, 6-9 and 12 months after AF ablation to assess SR maintenance.



Baseline Characteristics

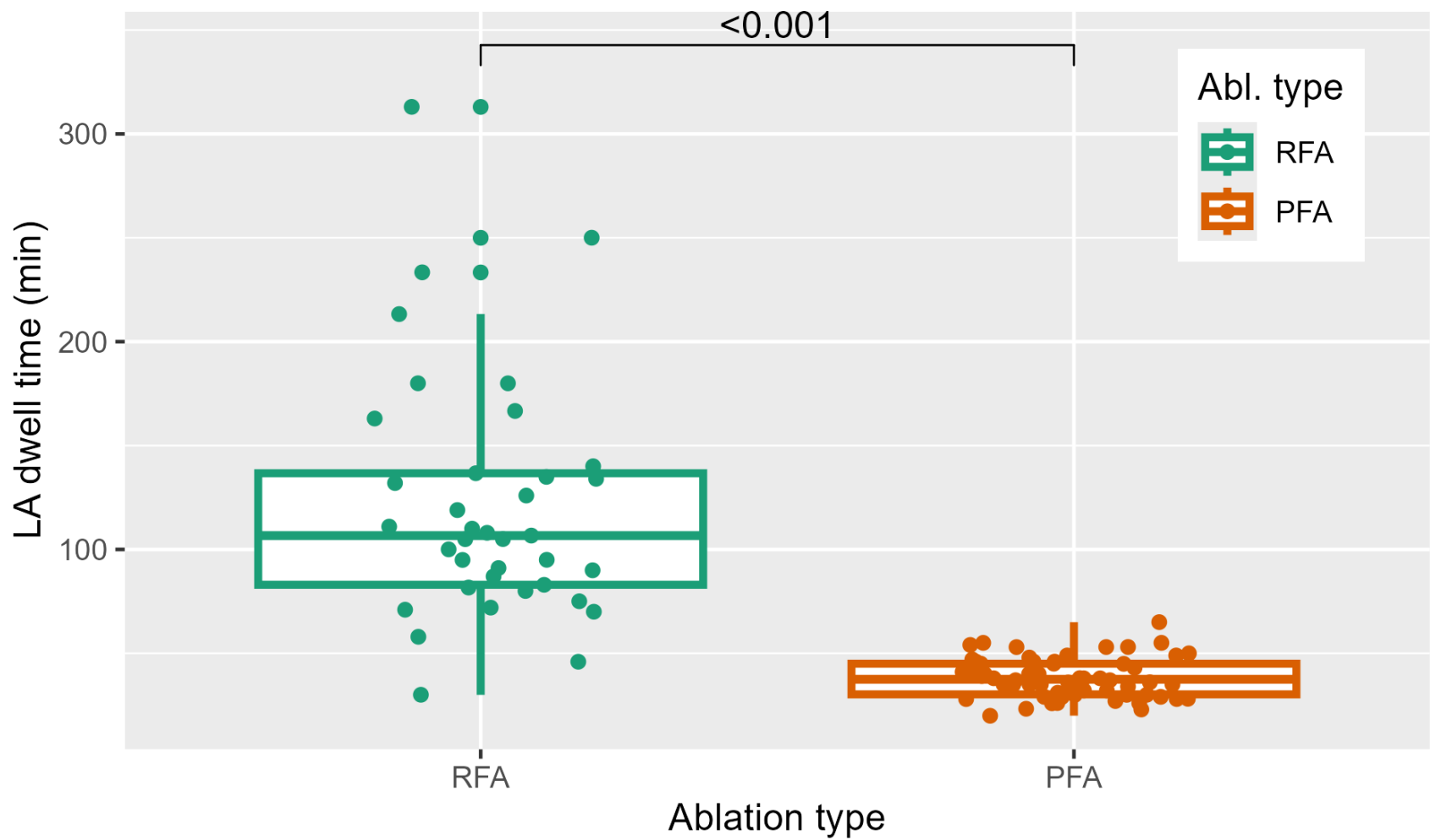
Variable	RFA (N=158)	PFA (N=390)
Age (years)	65.4 ± 10.9	63.8 ± 10.0
Sex (male)	113 (71.5%)	254 (65.1%)
BMI (kg/m ²)	30.4 ± 5.6	29.6 ± 5.1
Hypertension	109 (69.0%)	269 (69.0%)
Heart failure	40 (25.3%)	89 (22.8%)
AF form	Paroxysmal: 57.0%	Paroxysmal: 50.5%
AAD previous medication	114 (72.2%)	303 (77.7%)
LA diameter (mm)	43.7 ± 6.3	43.1 ± 6.9
LAVI (mL/m ²)	37.1 ± 19.1	38.4 ± 16.5

Total procedure time by ablation modality



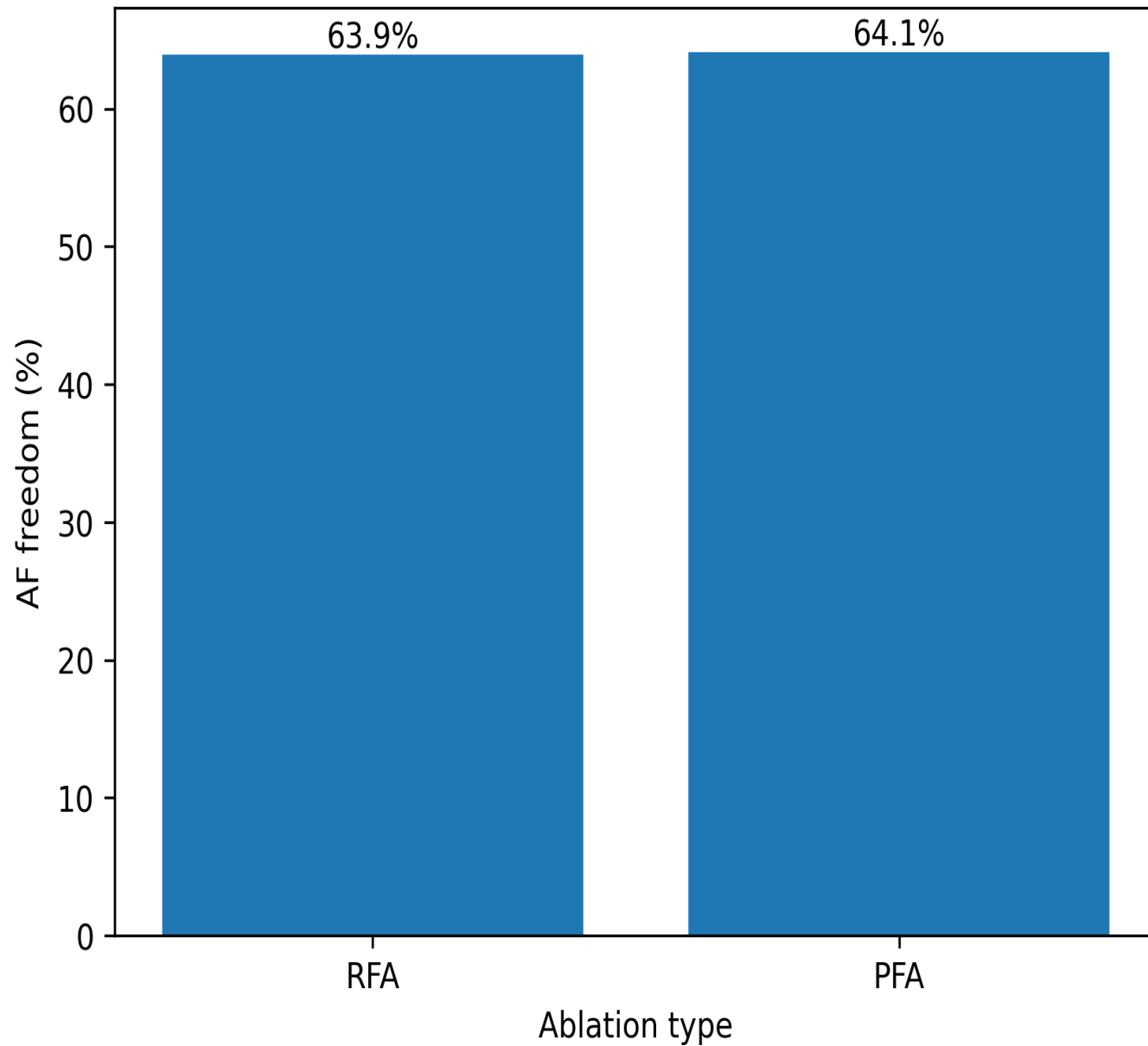
Wilcoxon

LA dwell time by ablation modality



Wilcoxon

AF Freedom After Ablation



Safety Profile

- Major adverse events: 1 in each group.
- Cardiac arrest (PFA), pericardial effusion (RFA).
- Very low complication rates overall.

Conclusion

- PFA associated with:
 - - Shorter procedural and LA dwell times.
 - - Similar safety profile.
 - - Comparable 1-year efficacy.

**Thank you for
your attention**

