

### Initial Clinical Assessment of Ablation Using a Novel Dual-purpose Pulsed Ablation Catheter for Typical Atrial Flutter: Case Report

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### Background

- Single-shot pulsed field ablation (PFA) catheters for pulmonary vein isolation have been developed. However, flexible ablation lesions for typical atrial flutter (AFL) and non-PV ablations are in areat need. 1
- A 7-Fr PFA catheter (PFLine, EnChannel Medical) capable of delivering both focal and linear ablations has been developed.

### Objective(s)

To demonstrate the safety and efficacy of linear ablation across the cavo-tricuspid isthmus (CTI) in patients with typical AFL.

#### Method

 Patients were consented and fully awake during the procedure. Local anesthesia with conscious sedation was administered. The patients had continuous infusion with nitroglycerin (5µg/min).





 A biphasic-bipolar 750V waveform was delivered from the NanoAblate generator (EnChannel Medical). Bidirectional block was assessed 20 minutes after the last application.

### Results

In both cases. CTI line ablations were successfully delivered.

**CTI Linear ablation** 

- The number of applications required to achieve bidirectional block were 5 and 4. The average PFA ablation time was 5.0 minutes. The average procedure time was 51.5 minutes.
- No diaphragmatic activity was observed during the ablation procedure, and no adverse events were reported. Both patients reported no sensation of pain during the PFA applications.

### Ablation modes

# **Focal Ablation** Cavo-tricuspid Linear Ablation Ablation

### Conclusion

The dual-purpose PFA catheter can safely and efficiently create linear lesions with minimal pain during treatment. However, a larger study with longer follow-up is needed to confirm these initial findings.

### Cardiac mapping guided ablation<sup>2</sup>



### **Disclosures / References**

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1. Ruwald et al. HeartRhythmCase Rep. 2022

2. Li et al. European Heart Journal - Case Reports 2024



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