

## ENDOSCOPIC CATHETER ABLATION OF AF

A novel endoscopic ablation system (CardioFocus® Inc., Marlborough, MA, USA) has shown promising efficacy and safety in a two-phase study. The system comprises a balloon ablation catheter with an endoscope that allows the operator to visualize the cardiac anatomy with a 110° field of view. This system overcomes many of the technical challenges associated with conventional pulmonary vein (PV) ablation.

In the first phase of the study, 88% of PVs in nine dogs were successfully isolated without evidence of endocardial or pericardial damage. The nonrandomized second phase assessed this system in 30 patients with drug-refractory atrial fibrillation. A marked learning curve was associated with the system—the mean procedural duration decreased from 386 min for the first 10 procedures, to 283 min for the last 10. The investigators successfully isolated 91% of PVs and no patients required a second procedure. At 12 months follow-up, 20 patients were free from atrial fibrillation, 18 of whom no longer required antiarrhythmic medication.

Adverse events were reported in three patients: one experienced an ischemic stroke and another had an episode of phrenic palsy, both of which resolved completely. One patient developed periprocedural cardiac tamponade that was considered related to the trans-septal puncture rather than the ablation procedure. This patient was successfully treated with pericardiocentesis.

The investigators are reluctant to speculate whether this ablation system will be suitable for everyone—atrial and PV anatomy is highly variable, and considerable heterogeneity was evident even in this small group of patients. However, their report notes that this ablation system “would be best served by the use of a compliant balloon able to better conform to the atrial anatomy”.

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