

## First Cases of Atrial Fibrillation Ablation in a U.S. Ambulatory Surgical Setting

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### Letters to the Editor

Atrial ablation for the treatment of atrial fibrillation (AF) has traditionally been performed only in the hospital setting; however, due to increased strain on hospitals during the pandemic, the Centers for Medicare and Medicaid Services (CMS) introduced the Hospitals Without Walls Program.<sup>1</sup> This program allows ambulatory surgery centers (ASCs) to perform procedures that were previously restricted to the hospital setting. As a result, the first atrial ablations for the treatment of AF have been completed in the ASC setting.<sup>2</sup> ASCs have been shown to offer increased efficiency in various specialties.<sup>3-6</sup> Nevertheless, no data exist regarding the potential efficiencies of performing ablation procedures in an ASC. As such, we report here the first ablation cases performed in an ASC.

Patients were excluded from consideration of treatment in the ASC if they had previously undergone ablations for the treatment of AF, or if they had been diagnosed with long standing persistent AF (only paroxysmal or short duration persistent AF patients were eligible for treatment at the ASC). Patients treated in the ASC were required to have a "caretaker" with the ability to transport them between the ASC and their homes. An emergency protocol was established and put into place before any ablations were performed in the ASC setting.

The ASC is a stand alone structure located approximately 1 mile from an affiliated hospital. The ASC has two operating rooms and one cardiac cath lab, and provides procedures such as heart catheterization, cardiac stenting, peripheral vascular disease treatment, and pacemaker, and ICD

insertion, in addition to general surgical and orthopedic procedures. The ASC employs one electrophysiologist, two cardiologists, and two surgeons. However, only the electrophysiologist was accompanied by surgical technicians during the ablation procedures.

The retrospective data reported in this letter adhered to regulation 45 CFR 46. 104(d)<sup>4</sup>, from the Department of Health and Human Services. The analysis was IRB reviewed (Advarra #Pro00053424) and was determined to be IRB exempt.

All patients in the study were treated with cryoballoon pulmonary vein isolation (PVI). Procedural approaches included transeptal puncture performed under intracardiac echo, and contrast venography and pressure waveform analysis performed prior to ablation to ensure good venous seal. No 3D mapping was used.

A total of 13 patients underwent ablations in the ASC setting with a mean age of  $71 \pm 8$  years, 5 of the 13 patients were female, 9 patients had paroxysmal atrial fibrillation and 4 persistent atrial fibrillation. The mean number of cryoablation applications per pulmonary vein was  $1.4 \pm 0.7$  with average application duration of  $187 \pm 37$  seconds. The mean procedural duration was  $52 \pm 10$  minutes and total mean time in the ASC was  $5.4 \pm 1.5$  hours. No acute adverse events occurred; however, one patient later presented to the emergency department with a sore throat and a groin hematoma without active bleeding or pseudoaneurysm.

### Limitations

Limitations of this data report include the inherent limitations in a retrospective analysis, and the inclusion of patients from only one operator; however, at this point, there are few operators performing ablations in ASCs to provide additional data.

### Key Words

Afib; ablation; Ambulatory Surgery Center; Ambulatory Surgical Setting

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## Conclusion

In conclusion, atrial ablation for the treatment of AF was safely conducted in an ASC setting with no acute complications occurring. Patients undergoing procedures in the ASC setting experienced short length of stay times.

## Conflict of Interests

William Zagrodzky was a paid employee at Attune Medical at the time of the study, Erik Kulstad declares equity interest in Attune Medical, Jason Zagrodzky consults for Biosense Webster, Attune Medical. Fred Kueffer is an employee of Medtronic.

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