SAFETY AND EFFICACY OF LEFT ATRIAL APPENDAGE OCCLUSION WITHIN THREE MONTHS FROM CATHETER ABLATION: A UNITED STATES SINGLE CENTER EXPERIENCE

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Background:

Patients undergoing left atrial appendage occlusion (LAAO) may also be appropriate candidates for catheter ablation of atrial fibrillation. Simultaneously performing both procedures may reduce cost and the associated risk of repeat interventional procedures. Due to insurance restrictions, same-day catheter ablation and LAAO are not reimbursed in the United States. We explored if catheter ablation followed by LAAO within three months is a safe and effective management option for patients with atrial fibrillation who can tolerate short-term anticoagulation.

Objective:

To assess the safety and efficacy of LAAO within three months following catheter ablation.

Method:

We conducted a retrospective, single-center study of patients who underwent LAAO within 3 months following a catheter ablation for atrial fibrillation. The outcomes included: device related thrombus, peri-device leak and major adverse cardiovascular events (MACE) defined as a composite of death from cardiovascular causes or stroke at 1 year.

Results:

The cohort included 32 (n=32) patients with a mean age of 75.1 ± 5.9 years, 69% were male (n=22) and 31% were female (n=10). 81.2 % (n=26) had hypertension, 78.1% (n=25) had hyperlipidemia, 21.9% (n=7) had diabetes, 31.2% (n=10) had a history of heart failure, 28.2% (n=9) had a prior ischemic stroke, 46.9% (n=15) had a history of vascular disease. The mean CHA2DS2Vasc score was 4.1 ± 1.0 and median follow-up was 541 days (IQR 310 - 1053). Post LAAO, 75% (n=24) were started on a direct oral anticoagulant (DOAC) and aspirin, 9.4% (n=3) on warfarin and aspirin, 6.3% (n=2) on DOAC and plavix, 6.3% (n=2) on warfarin and plavix, and 3.1% (n=1) on plavix monotherapy. In 12.5% (n=4) the anticoagulation was prematurely stopped prior to the 45 day TEE. After the 45 day TEE, 88.5% (n=28) were switched to DAPT and 9.4% (n=3)

were switched to plavix monotherapy. At 6 months, 3.1% (n=1) patients were on DAPT and 96.9% (n=31) were on a single antiplatelet agent.

Among 30 patients who had data on their 4-week follow-up TEE, 76.7% (n=23) had a complete LAA seal, 23.3% (n=7) had a satisfactory seal with <5-mm leak and none (n=0) had a leak >5mm. None of the patients (n=0) had a device-related thrombus and none of the patients (n=0) experienced a MACE.

Conclusion:

LAAO within three months following catheter ablation is a safe and effective treatment strategy for patients with atrial fibrillation, especially those at a high risk for stroke. Future multicenter studies and randomized trials are required to evaluate the safety, efficacy, and cost of staged versus simultaneous LAAO following catheter ablation.

Mean Age	**75.1 ± 5.9 years**
CHA_2DS_2-Vasc	**4.1 ± 1.0**
Male	**69 %**
Female	**31 %**
Prior ischemic stroke	**28.2 %**
Median follow-up	**541 days (IQR 310 - 1053)**
Complete LAA seal	**76.7 %**
Satisfactory (<5mm leak) seal	**23.3 %**
Unsatisfactory (>5 mm leak) seal	**0 %**
MACE	**0 %**

Table 1 Baseline characteristics, success, complications, and MACE rate