Thoracoscopic Left Atrial Appendage Excision plus Atrial Fibrillation Ablation as a Secondary Prevention strategy against stroke: Initial Experience and Two Year Outcome data

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**Introduction**: Atrial fibrillation (AF) patients with a previous stroke are often at a high risk of recurrent stroke and bleeding. Anticoagulation therapy in such patients is a challenging dilemma. Currently, thoracoscopic left atrial appendage excision (LAAE) plus AF ablation is an interventional approach offered to some AF patients. We hypothesized that this approach may be suitable as a secondary stroke prevention strategy for these high-risk patients.

**Methods**: Between January 2013 and December 2016, a total of 44 patients (26 male; mean age 65.0±9.1 years) with nonvalvular AF and a previous stroke or systemic thromboembolic event were enrolled in our study. The patients underwent thoracoscopic LAAE plus AF ablation by experienced operators and were followed up for 2 years (at 1, 3, 6, 9, and 12 months postoperatively and every 6 months thereafter). Thromboembolic and major bleeding events were recorded. Cerebral computed tomography or magnetic resonance imaging and 7-day Holter monitoring were performed annually.

**Result**: Mean CHA2DS2-VASc and HAS-BLED scores were 4.2±1.2 and 3.3±0.7, respectively. All patients discontinued oral anticoagulation (OAC) therapy after the surgical intervention. One patient suffered a peri-procedural transient ischemic attack, and another was diagnosed with a new ischemic stroke at 491 days after surgery. The annual rate of total thromboembolism was 2.05%. No deaths or major bleeding events were observed postoperatively. The rate of successful AF ablation with no AF recurrence is 76.3%.

**Conclusion**: Trans-thoracoscopic LAAE plus AF ablation may be a promising approach for this high-risk population. Thromboembolism prevention in this secondary prevention cohort was low, even without OAC treatment.