Abstract: **P345**

Catheter ablation for atrial fibrillation is associated with lower incidence of stroke, major bleeding and death: data from Korean health registries

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Background: Compared with antiarrhythmic drug therapy, catheter ablation of AF reduces the number of AF episodes, prolongs the time in sinus rhythm, and improves quality of life. However, it is still unclear if catheter ablation for atrial fibrillation (AF) affects the prognosis or merely is a symptomatic treatment. Our objective was to compare long-term outcome regarding stroke, major bleeding and death in AF patients with and without ablation, and in relation to long-term exposure to anticoagulants.

Methods: We identified all 800,084 patients with a diagnosis of AF from 2006 to 2015 in the Korean national health insurance service database. During a 10-year period, 10,979 AF ablations were performed among 9,768 individuals. Propensity scores for the likelihood of AF ablation were obtained by logistic regression. Propensity score (PS) matching was used to construct two cohorts of equal size (n = 9,768) with similar characteristics in 16 dimensions.

Results: Patients who had undergone catheter ablation were younger (57.2 vs. 65.6 years, P<0.001) and healthier (mean CHA2DS2-VASc scores 2.5±1.7 vs. 3.6±2.1, P<0.001) than other patients with AF. Mean follow-up was 5.5±3.1 years. After propensity score matching, in the ablated group, 472 patients suffered ischemic stroke/systemic embolism (SE) compared with 1,682 in the matched non-ablated (annual rates 2.92 vs. 1.10%, P<0.001). Major bleeding occurred in 439 and 1,219 patients in ablated and non-ablated (annual rates 2.07 vs. 1.01%, P<0.001). A total of 306 ablated and 1,439 non-ablated patients died (annual rates 2.31 vs. 0.69%, P<0.001). After multivariable adjustments, catheter ablation was associated with lower risk of ischemic stroke (hazard ratio (HR) 0.51, 95% confidence interval (CI) 0.38–0.67), lower risk of major bleeding (HR 0.65, 95% CI 0.57–0.75) and with lower mortality risk (HR 0.39, 95% CI 0.34–0.46). The reduction of stroke/SE and mortality was observed after AF ablation regardless thromboembolic risk. Major bleeding was reduced only among patients with CHA2DS2-VASc score >=2 (HR 0.70, 95% CI 0.59–0.84).

Conclusion: We found a strong association between ablation and survival. Ablation may be associated with lower incidence of ischemic stroke and major bleeding in patients with AF. The reduction of stroke/SE and mortality was observed regardless thromboembolic risk after AF ablation. But the risk of major bleeding was reduced only in patients with high thromboembolic risk factors.