Introduction: Recently, catheter ablation of symptomatic atrial fibrillation (AF) is more likely to be the standard treatment in the elderly population. It has been reported that catheter ablation in elderly patients is as effective and safe as in young patients. However, the safety and efficacy in elderly Japanese populations still remains unknown.

Methods: Six hundred twenty-eight patients underwent their first catheter ablation in our hospital from September 2008 to June 2019. The patients were divided into two groups; elderly group (≥75 years old; n=75, age 79.3±3.7, 31 males [41.3%]) and young group (<75 years old; n=553, age 54.3±10.8, 498 males [90.5%]). AF recurrence after a single session and the complications rate were investigated.

Result: The CHADS2 score and left atrial diameter (LAD) were significantly greater in the elderly group (elderly group vs. young group; CHADS2 score, 2.09±1.13 vs. 0.59±0.87, p<0.0001; LAD mm, 43.3±8.8 vs 39.8±7.4, p<0.0001). However, there was no significant difference in the arrhythmia recurrence between the two groups (elderly group vs. young group; 79.2% [95% CI:67.2-88.8] vs. 74.9% [95% CI:70.2-79.0]). Major complications were observed in 2 (2.6%) elderly group patients (cardiac tamponade) and 5 (0.9%) young group patients (cardiac tamponade 3, symptomatic cerebral infarction 1, and a hematoma needing a blood transfusion 1). However, there was no significant difference in the incidence of complications between the two groups (p=0.17).

Conclusion: Although there were several differences among the background characteristics, catheter ablation of AF was safe and effective in the elderly patients. Ablation should be considered as an alternative choice in symptomatic elderly patients with AF.