Catheter ablation of atrial fibrillation prevents cardiovascular events and death in over 80-year-old patients

Satoshi Taya  
Keisuke Okawa  
Masahiko Takahashi  
Ryu Tsushima  
Keisuke Yamamoto  
Yuya Sudo  
Masahiro Sogo  
Satoko Ugawa  
Tomoaki Okada  
Kazumasa Nosaka  
Kosuke Sakane  
Masayuki Doi

**Introduction**: We already know the fact that the efficacy and safety of catheter ablation is established even in elderly patients with atrial fibrillation (AF). However, the impact of catheter ablation on the prognosis in very elderly AF patients is unclear.

**Methods**: We prospectively investigated 186 consecutive AF patients over 80-years-old from March 2011 to January 2018 in two key acute care hospitals in Kagawa prefecture. We compared the patients who underwent CA with those who received medical therapy alone (ablation group [n=65] vs. medication group [n=121]). All patients had taken anticoagulants, and were followed up for at least 6 months. We defined the primary end point as death from any cause and cardiovascular events including heart failure, acute coronary syndrome, and stroke. We defined the secondary end point as death from any cause and cardiovascular events, respectively.

**Result**: The follow-up period was 478 days (median). Any therapy related adverse events did not occur. The incidence of primary end point was significantly lower in the ablation group than in the medication alone group (n=4 [6.2%] vs. n=40 [33%]; hazard ratio=0.19, confidence interval 0.087 to 0.69, Logrank p < 0.01)(Figure). Multivariate analysis revealed that independent predictor of primary end point was only medication alone therapy (odds ratio [OR]=4.37, p=0.007). Even though there were several other elements which tended to get poor prognosis, for example age (over 83-year-old; OR=1.29, p=0.50), low cardiac function (OR=1.61, p=0.25), prior cardiovascular events (OR=1.57, p=0.16), female (OR=1.75, p=0.093), and persistent or chronic atrial fibrillation (OR=1.56, p=0.18), there were no significant difference.

**Conclusion**: CA of AF could prevent cardiovascular events and death in over 80-year-old patients.