# The Effect of Catheter Ablation for Atrial Fibrillation with Heart failure

이화여자대학교 의과대학 내과학교실[1], 이대목동병원 순환기내과[2]

**전효주[1,2], 박준범[1,2]**

Atrial fibrillation (AF) is a risk factor for mortality among patients with heart failure (HF). As Radio-frequency Ablation (RFA) is a definite treatment of choice for AF, its procedure is predicted to improve heart function. Hence, we present a case of a HF patient with AF and the effect of RFA. A 73-year-old man came into our outpatient room presenting dyspnea on exertion and palpitation. The symptom was estimated as the New York Heart Association (NYHA) class II and the Killip class II. He had underlying chronic conditions, including hypertension and diabetes mellitus. An initial transthoracic echocardiogram (TTE) reported global hypokinesia and left ventricle dilation (LV end-diastolic dimension [LVEDD] and LV end-systolic dimension [LVESD] of 62 and 52mm, respectively). The LV function was reduced, with an ejection fraction (EF) of 34%. In addition, the NT-proBNP was elevated to 2256pg/mL. On his initial electrocardiogram, AF was prominent. On the basis of CHA2DS2-VASc score 4, he was prescribed apixaban along with amiodarone, carvedilol, losartan. The loading and maintenance dose of amiodarone were 400mg and 200mg, respectively and the total loading dose of amiodarone was 3.6g for nine days from January 17th to 25th, 2016. After five months, the follow up TTE reported LVEF of 55% and consistent AF but rather the EF reduces to 38% in 2018. Despite the medical treatment, HF was progressed and thus we decided to control AF. Indeed, he had no evidence of coronary artery occlusion according to Coronary Angiography conducted in 2017. The RFA was performed in March, 2018 and a normal sinus rhythm was restored. After one year, his LVEF recovered to 56% with LVEDD of 60mm and LVESD of 42mm and the NYHA class I and Killip class I were observed. The combined condition of AF and HF is common. According to an article by Nassir F. Marrouche et al. 2018, RFA for AF significantly improves long-term outcomes among HF patients. In this trial, the patients who have undergone RFA had less percentage of hospitalization for worsening HF than those who did not. Since AF induces mortality of HF patients, treating AF with RFA can lead to increase the overall survival rate.