**A CASE REPORT OF HEART FAILURE WITH PRESERVED EJECTION FRACTION DURING ATRIAL FIBRILLATION TREATMENT WITH PILSICAINIDE**

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**Introduction**: Recently, the number of patients with atrial fibrillation ( AF ) has been increasing. Sodium channel blocker has been used to treat AF in patients with normal cardiac function. At clinical dosage, it has been reported that pilsicainide has little effect on cardiac contraction or left ventricular end-diastolic pressure in physiological state.

**Case presentation**: The patient was 70 year-old female who was treated with oral pilsicainide 150mg per day and bisoprolol 5mg per day due to paroxysmal atrial fibrillation. A few months after she started taking anti-arrhythmics, she was referred to our institute due to dyspnea on effort. She was diagnosed as acute heart failure by physical examination, BNP elevation and elevated right ventricular systolic pressure on echocardiogram. Her left ventricular ejection fraction on echocardiogram was 50%. After admission, her heart failure was favorably controlled by discontinuation of anti-arrhythmic. She underwent coronary angiography and no coronary stenosis was detected. She underwent Swan-Ganz catheter examination and electro-physiologyical study

(EPS) for assessment of heart failure and consideration of pacemaker indication. During EPS, pilsicainide was administered to assess sinus node function and atrio-ventricular conduction under continued hemodynamic monitoring with Swan-Ganz catheter. After 50 mg of pilsicainide administration, her mean pulmonary capillary wedge pressure (PCWP) was increased from 2 mmHg to 9 mmHg without alteration in cardiac index. Upon consideration of this elevation in PCWP by single administration of pilsicainaide, we conclude that pilsicainide administration was one of the causes of heart failure in this patient. As pilsicainide is broadly used anti-arrhythmic, we report this case for its clinical importance.