

**Introduction**: Atrial fibrillation (AF) and Heart failure (HF) are modern cardiovascular epidemics with significantly increased morbidity and mortality. There is increased recognition of coexistent AF and HF with preserved ejection fraction (HFpEF). Invasive haemodynamics is considered to be the gold standard for diagnosis of HFpEF. Objective: To determine the echocardiographic and exercise haemodynamic differences in patients undergoing AF ablation with or without HFpEF.

**Methods**: All patients underwent invasive haemodynamic testing with exercise right heart study, cardiac MRI, echocardiogram, and BNP testing. Only patients with EF >50% were included. Mann-Whitney U test was used for statistical analysis.

**Result**: Total of 70 people were suitable for the study and invited to participate of which 41 (58.6%) participated in the study. Three were excluded due to decline in EF after enrolment. Total of 38 patients were included in the analysis. Detailed results are included in the table below. 60% of people undergoing AF ablation have undiagnosed HFpEF. 13/23 patients with HFpEF were in AF at the time of their exercise study. Total exercise time was lower in those with comorbid AF-HFpEF. Overall, patients with AF-HFpEF had lower exercise tolerance and decreased cardiac output at rest and with exercise.

**Conclusion**: Exercise capacity in patients with AF patients is markedly reduced if they have coexistent HFpEF. Rhythm control and maintenance of AV synchrony with catheter ablation may provide clinical benefit in this patient population. Future prospective studies are needed in this field.