**When to Shoot the Coronaries? An Analysis of the Timing of Coronary Investigations in New Heart Failure Presentations**

**Background**

Clarification of aetiology of cardiomyopathy is an important part of management and guides on longer term treatment and prognosis. For patients with heart failure with reduced ejection fraction (HFrEF) and coronary artery disease (CAD) current literature suggests that coronary artery bypass graft surgery (CABG) provides benefit with concurrent medical therapy after 10 years with no data showing that percutaneous coronary intervention (PCI) provides additional benefit. Optimum timing in coronary assessment is uncertain.

**Methods**

Retrospective study of patients discharged with new HFrEF under the cardiology team at Middlemore Hospital during 2022. Presentations with acute coronary syndrome (ACS), primary valvular pathology, known HFrEF or coronary investigations prior to admission were excluded.

Outcomes measured were the number receiving inpatient (IP) or outpatient (OP) CT Coronary angiography (CTCA) and/or invasive coronary angiography (ICA) and 5-point MACE (major adverse cardiovascular events) including stroke, ACS, cardiovascular death, heart failure hospitalisation and ventricular arrythmia.

**Results**

Our analysis included 157 patients. 11 (7%) had IP coronary investigations and 32 (20%) had OP investigations. MACE was observed in 3 (27%) of patients with IP investigations, 8 (25%) with OP investigations and 35 (31%) with no coronary investigations. Individual components of MACE had similar rates.

**Conclusion**

The timing of coronary investigations did not affect outcomes. This study could be repeated in different cohorts with larger sample size. These results may suggest OP coronary investigations could be considered instead of IP investigations and a large benefit is derived from HF therapy in this cohort rather than pursuing IP coronary investigations.