

Transcatheter Aortic Valve Implantation (TAVI) also called Percutaneous Aortic Valve Replacement (PAVR)

Calcific aortic valve stenosis can cause angina, heart failure, syncope and death. The standard of care for severe symptomatic aortic stenosis is surgical replacement. Of patients with symptomatic stenosis who do not have valve replacement, about half will die in 2yrs. Medical treatment and aortic balloon valvuloplasty do not prolong life and have limited ability to improve symptoms. Patients at high risk or who are unsuitable for conventional surgical replacement because of advanced age or comorbidities may be suitable for TAVI. In an entirely percutaneous procedure, a prosthetic valve is advanced from a femoral artery to be deployed across the aortic valve. Sometimes there is a surgical cut down to the femoral artery, subclavian artery or left ventricular apex. The femoral approach can be done under general or local anaesthesia.

My colleagues and I at Mercy Angiography/Auckland Heart Group have treated 37 patients with the CoreValve with no stroke and the only death was in a very high risk patient. Mean age was 85 yrs with the oldest patient being 94 years old. Patients are mobilized on the day of the procedure. Hospital stay is about 6 days. Some patients will require permanent pacemaker implantation for heart block. Patients should be maintained on long term aspirin. Clopidogrel is used early after the procedure. Warfarin may be required if a patient's rhythm is atrial fibrillation.

Workup includes a consultation, echocardiography, coronary angiography and sometimes stenting of stenoses, and angiography to ensure the aorta and femoral arteries are anatomically suitable. The procedure is expensive.