Investigating the performance of a novel cardiovascular implantable electronic device (CIED) capable of natural (physiological) pacing of the heart. A new cardiac ultrasound (echocardiography) analysis technique, known as Global Longitudinal Strain (GLS), will be used to assess the performance of cardiac contraction during this physiologic pacing.

ACTRN12620000149965

Status	RECRUITING
Sponsor	Dennis Lau
Enrollment	35 participants

Plain Language Summary

Some people with heart rhythm problems need a pacemaker to help their heart beat properly. Traditional pacemakers stimulate the heart from the right ventricle — a location that does not perfectly mimic the heart's natural electrical pathway, which can sometimes cause the heart muscle to work less efficiently over time. Newer pacemakers can place the lead at a site called the His-Purkinje system, which is closer to the heart's natural wiring, producing what is called 'physiological pacing'.

This study is using a specialised ultrasound technique called Global Longitudinal Strain (GLS) to measure how well the heart muscle contracts under physiological pacing. GLS is more sensitive than standard echocardiography and can detect subtle differences in heart function that might otherwise be missed.

You may be eligible if you already have a cardiac implant device with a lead placed in the His-Purkinje system, and that lead is working and programmable. You must also be able to have a standard echocardiogram. People with severe valvular heart disease, significant heart failure, or pregnancy are not eligible.

Key Eligibility Criteria

Inclusion (4)

- •The patient must have a Cardiac Implanted Electronic Device (CIED) with a functioning lead implanted in the His-purkinje system.
- •The lead implanted in the His-purkinje system must be programmable and capturing.
- •The patient must be suitable for Transthoracic Echocardiography (TTE).
- •Able to provide consent.

Exclusion (9)

- •Unable to provide written informed consent to participate in this study.
- •Participating in another clinical research trial where programming adjustments to the CIED would be unacceptable.
- •CIED that does not have a functioning lead implanted in the His-purkinje system.
- •Pacing from the CIED is known to cause the patient to become haemodynamically unstable.
- •Valvular stenosis or regurgitation of >moderate severity

... and 4 more (see full listing online)

Locations (1 total)

The Royal Adelaide Hospital - Adelaide, SA, Australia

https://www.anzctr.org.au/TrialRegistration/TrialReview.aspx?ACTRN=ACTRN12620000149965