

The effect of subcutaneous glyceryl trinitrate on radial artery diameter and the utility in radial access coronary angiography

ACTRN12622000043730

Status	RECRUITING
Sponsor	Royal Brisbane & Women's Hospital
Enrollment	300 participants

Plain Language Summary

Coronary angiography — a procedure to look at the blood vessels of the heart — is increasingly performed via the wrist (radial artery) rather than the groin, because it has fewer bleeding complications. However, the radial artery can go into spasm during the procedure, making it harder to access. One potential solution is to inject a small amount of glyceryl trinitrate (GTN, a vasodilator) under the skin near the artery before inserting the catheter, to help the artery relax and widen.

This randomised placebo-controlled trial will compare subcutaneous GTN injection versus a placebo injection before radial artery puncture. Ultrasound will measure changes in artery diameter, and the study will also record how long it takes to successfully access the artery and whether patients experience more or less pain.

You may be eligible if you are having a planned (non-emergency) coronary angiogram via the radial (wrist) approach. People with low blood pressure, emergency heart attacks (STEMI), certain heart conditions, known sensitivity to GTN, glaucoma, prior stroke, or who have recently taken erectile dysfunction medications would not be eligible. This is a simple, practical study that could directly improve the comfort and success rate of a very common cardiac procedure.

Key Eligibility Criteria

Inclusion (2)

- Patient attending for a planned coronary angiogram – outpatient or inpatient
- Planned for transradial approach

Exclusion (11)

- Presentation requiring emergent coronary angiography including ST-elevation myocardial infarction (STEMI)
- Cardiogenic shock
- Requiring inotropic support or intra-aortic balloon pump insertion
- Known severe aortic stenosis
- Known left ventricular outflow tract obstruction (including hypertrophic cardiomyopathy)
- ... and 6 more (see full listing online)

Locations (1 total)

The Prince Charles Hospital - Chermside, QLD, Australia