

Complete Versus Lesion-only Primary PCI Pilot Study

Submission date 01/02/2011	Recruitment status No longer recruiting	☒ Prospectively registered ☐ Protocol
Registration date 24/02/2011	Overall study status Completed	☐ Statistical analysis plan ☒ Results
Last Edited 13/06/2016	Condition category Circulatory System	☐ Individual participant data

Plain English summary of protocol

Background and study aims

A heart attack happens because the coronary artery becomes blocked. If this block is not relieved within a certain time from the onset of symptoms then irreparable heart muscle damage occurs, which will impact on the patient's future prognosis. The standard of care for patients suffering heart attacks is to rush them to the catheter lab and use a wire, balloon and stent to open up and retain the lumen to restore blood flow (percutaneous coronary intervention [PCI]). In about 30% of patients other narrowings are found at the time of the procedure. Knowing what to do with these narrowings has become a contentious and hotly debated issue. Previous research suggests that the narrowing should not be treated, but a recent trial suggested there was benefit from treating them.

Who can participate?

Patients with suspected or proven acute myocardial infarction scheduled for PCI for clinical reasons.

What does the study involve?

Patients found to have narrowings in non-heart attack causing arteries were randomly allocated to one of two groups. One group was treated by opening the artery that was causing the heart attack and so restoring flow but not treating any other narrowings in other arteries. For the other group both the blocked artery and any noted significant narrowings were treated.

What are the possible benefits and risks of participating?

The risks of participating are not significant since the current standard of care is to undertake angioplasty on the artery causing the heart attack.

Where is the study run from?

University Hospitals of Leicester (UK)

When is the study starting and how long is it expected to run for?

April 2011 to May 2014

Who is funding the study?
British Heart Foundation and Medical Research Council (MRC)/National Institutes of Health Research (NIHR) (UK)

Who is the main contact?
Prof Anthony Gershlick

Contact information

Type(s)
Scientific

Contact name
Prof Anthony Gershlick

Contact details
Professor of Interventional Cardiology
University Hospitals of Leicester
Leicester
United Kingdom
LE3 9QP

Additional identifiers

Protocol serial number
V 1.1 30th Sep 2009; EME 10-27-01

Study information

Scientific Title
A study of patients with multi-vessel disease presenting with acute myocardial infarction undergoing primary percutaneous coronary intervention (PPCI) including a prospective registry of all PPCI patients and a pilot study in a subset of patients with multi-vessel coronary disease randomised to a strategy of early multi-vessel revascularisation or infarct related artery revascularisation only

Acronym
CVLPRIT

Study objectives
The CVLPRIT study is made up of two parts, the observational registry of all percutaneous coronary intervention (PPCI) patients (REGISTRY) admitted to the participating hospitals and a randomised controlled trial in those with multivessel coronary disease (RCT).

The main research questions for the two parts are:

1. Registry: What is the proportion of patients with heart attacks who undergo PPCI who also have multivessel disease (more than one coronary artery blocked or narrowed).
2. Randomised controlled trial: In patients with multivessel disease to compare the feasibility,

safety and prognosis of a strategy of "complete" early coronary revascularisation (i.e. opening all blockages and narrowings of the coronary arteries) with a "culprit" lesion only strategy (only open the coronary artery causing the heart attack).

Ethics approval required

Old ethics approval format

Ethics approval(s)

Trent Research Ethics Committee, 21/01/2011, ref: 11/H0405/4

Study design

Prospective observational registry and open multicentre randomised controlled trial

Primary study design

Interventional

Study type(s)

Treatment

Health condition(s) or problem(s) studied

ST elevation myocardial infarction (STEMI)

Interventions

Primary percutaneous coronary intervention in patients with multi-vessel coronary disease randomised to a strategy of early multi-vessel revascularisation or infarct related artery revascularisation only. The randomised patients will be followed up for 12 months.

Intervention Type

Procedure/Surgery

Primary outcome(s)

Cumulative major adverse cardiovascular events (MACE): all-cause mortality, recurrent MI, heart failure, need for revascularisation (PCI or CABG), measured up to 12 months

Key secondary outcome(s)

1. Individual components of primary composite outcome
2. Safety: Emergency coronary artery bypass graft (CABG), confirmed stroke, major bleeding, surgical repair of vascular complications, up to 12 months
3. Number of patients presenting with PPCI with significant micro vessel density (MVD)
4. Ischaemic burden at 6-8 weeks (expressed as % of total) by MPS
5. Economic assessment and cost efficacy including days in hospital at 12 months
6. Contrast induced nephropathy (rise Cr greater than 25%) or 44.2 umol/l within 48 hours persisting greater than or equal to 48 hours
7. Change in NT-ProBNP from pre-discharge to 12 months
8. Echocardiographic left ventricular ejection fraction (LVEF) and wall motion score (discharge and 12 months)
9. Quality of Life Score at 12 Months (EuroQol questionnaire)
10. Infarct size, extent of microvascular obstruction, myocardium salvaged, left Ventricular (LV) volumes and ejection fraction (EF) at discharge by CMR and new myocardial injury and volumes at 9 - 12 months

Completion date

30/05/2014

Eligibility

Key inclusion criteria**Registry:**

1. Suspected or proven acute myocardial infarction
2. Significant ST elevation on electrocardiogram (ECG)
3. Less than 12 hours of symptom onset
4. Scheduled for primary percutaneous coronary intervention (PCI) for clinical reasons
5. Provision of verbal assent followed by written informed consent

RCT:

1. Suspected or proven acute myocardial infarction
2. Significant ST elevation on ECG
3. Less than 12 hours of symptom onset
4. Scheduled for Primary PCI for clinical reasons
5. Provision of verbal assent followed by written informed consent
6. Multivessel coronary disease detected at time of angiography

Participant type(s)

Patient

Healthy volunteers allowed

No

Age group

Adult

Sex

All

Key exclusion criteria**Registry:**

There are no formal exclusion criteria for the CVLPRIT registry for patients that meet the inclusion criteria.

RCT:

1. Any contraindication to PPCI or multi-vessel PPCI
2. Less than 18 years age
3. Clear indication for or contraindication to multivessel PPCI, according to operator judgement and the reasons will be documented
4. Severe kidney impairment

Date of first enrolment

01/04/2011

Date of final enrolment

30/05/2014

Locations

Countries of recruitment

United Kingdom

England

Study participating centre

University Hospitals of Leicester

Leicester

United Kingdom

LE3 9QP

Sponsor information

Organisation

University Hospitals of Leicester NHS Trust (UK)

ROR

<https://ror.org/02fha3693>

Funder(s)

Funder type

Charity

Funder Name

British Heart Foundation (BHF) (UK) (ref: SP/10/001/28194)

Alternative Name(s)

The British Heart Foundation, the_bhf, BHF

Funding Body Type

Private sector organisation

Funding Body Subtype

Trusts, charities, foundations (both public and private)

Location

United Kingdom

Funder Name

Medical Research Council (MRC)/National Institutes of Health Research (NIHR) (UK) - Efficacy and Mechanism Evaluation (EME) Programme (ref: EME 10-27-01)

Results and Publications

Individual participant data (IPD) sharing plan**IPD sharing plan summary**

Not provided at time of registration

Study outputs

Output type	Details	Date created	Date added	Peer reviewed?	Patient-facing?
Results article	results	17/03/2015		Yes	No
Results article	results	22/12/2015		Yes	No
Results article	results	01/01/2016		Yes	No
Results article	results	31/05/2016		Yes	No
Results article	results	01/06/2016		Yes	No