CHIEF SCIENTIST OFFICE

CODE: TCS/21/31

RESEARCH PROJECT BRIEFING

TARGET-Type 2: Pilot Randomised Controlled Trial

AIMS

Type 2 myocardial infarction occurs when the heart is under strain during another illness. It is very common, responsible for nearly a third of all heart injury identified in patients in hospital. It is quite different to a traditional heart attack (known as a type 1 myocardial infarction) where the heart artery is blocked with a clot, and we have no known treatments. These patients can have poor short and long term outcomes.

TARGET-Type 2 was a pilot feasibility trial enrolling patients with type 2 myocardial infarction into a randomised trial of further imaging tests for heart artery disease or heart muscle weakness.

The aim was to demonstrate we could identify, recruit and randomise patients to further tests which could guide treatment and improve outcomes.

KEY FINDINGS

- We recruited 60 patients with type 2 myocardial infarction from two hospitals in Scotland who were successfully randomised to the intervention or standard care
- There was excellent compliance with our recommendations for treatment
- All participants completed follow up
- We have demonstrated it is feasible to recruit and randomise these patients and now plan a main phase trial application

WHAT DID THE STUDY INVOLVE?

The study was a pilot randomised controlled trial conducted with the Edinburgh Clinical Trials Unit across two hospitals in Scotland.

Patients were randomised to either standard care or a CT scan and a heart ultrasound scan along with treatment for heart artery disease or heart muscle weakness.

All patients were followed up for 90 days using electronic records.

A subset of patients took part in a qualitative interview study to discuss their decision to participate or not to participate in the trial.

We designed the study with the help of a patient and public involvement group who continue to participate in our research plans.

WHAT WERE THE RESULTS AND WHAT DO THEY MEAN?

Our results demonstrated it is feasible to recruit and randomise patients with type 2 myocardial infarction to a randomised trial

This is essential as we know these patients are older, have other health problems and are often in hospital for several days.

By demonstrating recruitment is feasible, we have shown the likely rate that we can randomise patients at, which will allow us to plan a multi-centre intervention trial.

The qualitative study revealed modifiable and non-modifiable factors that may improve recruitment rates. Modifiable factors included simplification of the intervention, and discussion of the terminology used to describe type 2 myocardial infarction in the clinical setting.

WHAT IMPACT COULD THE FINDINGS HAVE?

- Further trials recruiting patients with type 2 MI are now planned.
- Patients with type 2 MI have had the opportunity to participate in research as well as to discuss the implications of this diagnosis in focus groups.
- A powered multi-centre trial is required to influence policy and practice, but we are now in a robust position to seek this funding and to plan our trial.

HOW WILL THE OUTCOMES BE DISSEMINATED?

We have submitted an abstract to the American Heart Association Congress 2024

We are writing our manuscript for submission to Circulation (in parallel to above)

We are applying to the NIHR for funding for a UK wide multi-centre trial in conjunction with our PPI co-applicant, national collaborators and with a broadening of our PPIE group.

CONCLUSION

It is feasible to recruit and randomise patients with type 2 myocardial infarction to a trial using cardiac imaging to diagnose heart artery disease and heart muscle weakness. The complementary qualitative research helped us to deepen our understanding of the patient experience of the disease and the impact of receiving a diagnosis as a result of the trial.

Gaining insights into barriers and facilitators to taking part in research will help shape future study designs. For the first time, we have the potential to target treatment for these patients who have not been studied before and can have poor clinical outcomes.

RESEARCH TEAM & CONTACT

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Additional Information
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