ISRCTN67540073 https://doi.org/10.1186/ISRCTN67540073

Evaluating the effects of early administration of fibrinogen concentrate in adults with major traumatic haemorrhage.

Submission date
05/08/2015

Recruitment status
No longer recruiting

Registration date
06/08/2015

Overall study status
Completed

Last Edited
12/09/2023

Condition category
Injury, Occupational Diseases, Poisoning

[X] Prospectively registered
[X] Protocol
[_] Statistical analysis plan
[X] Results
[_] Individual participant data

Plain English summary of protocol

Background and study aims
Injury is a leading cause of death and disability worldwide. Around 7,800 people die in England every year, and many thousands more are left severely disabled. Uncontrolled bleeding is the main cause of death in 40% of cases. Transfusion therapy (which includes giving patients additional red blood cells, fresh frozen plasma, platelets and cryoprecipitate) is an important part of emergency treatment for major bleeding. Although the standard transfusion therapy is routinely followed in all hospitals, we are not sure whether by giving an additional source of fibrinogen, with a drug called fibrinogen concentrate, as quickly as possible works better than standard practice. The main objective of this clinical trial is to test whether it is possible to give fibrinogen concentrate within 45 minutes of admission to hospital to adult trauma patients with severe bleeding.

Who can participate?
People aged at least 16 with severe bleeding and shock.

What does the study involve?
Patients are randomly allocated to one of two groups. Those in group 1 are given 6g of fibrinogen concentrate within 45 minutes of being admitted to hospital, in addition to standard major haemorrhage therapy. Those in group 2 are given a placebo in additional to the standard major haemorrhage therapy. The effects of the two treatment regimens are then compared, focusing in particular on differences in blood test results and on clinical outcomes such as bleeding and organ failure.

What are the possible benefits and risks of participating?
The potential benefits associated of this study include early stopping of major bleeding which may lead to reduced need for transfusions of red cells, plasma or platelets. This, in turn, may lead to improved clinical outcomes such as reduced stays on intensive care, or total in hospital stay. It may have an effect on reducing the number of deaths, but this is not yet known. The

theoretical risk of giving higher dose fibrinogen is to cause an increased chance of thromboembolism (blood clot) both in the vein (such as a pulmonary embolism or deep venous thrombosis) or in the artery (such as a heart attack or a stroke).

Where is the study run from?
The John Radcliffe Hospital (lead centre), the Royal London Hospital, Southampton General Hospital and the Edinburgh Royal Infirmary (UK)

When is the study starting and how long is it expected to run for?
October 2015 to April 2017

Who is funding the study?
CSL Behring

Who is the main contact?
Dr Nicola Curry

Contact information

Type(s)
Scientific

Contact name
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Protocol serial number
19181

Study information

Scientific Title
A multi-centre, randomised, double blind, placebo-controlled trial evaluating the effects of early administration of fibrinogen concentrate in adults with major traumatic haemorrhage.

Acronym
E-FIT 1 v1.0

Study objectives
The main objective of this clinical trial is to test whether it is possible to give fibrinogen concentrate within 45 minutes of admission to hospital to adult trauma patients with severe bleeding.

Ethics approval required
Old ethics approval format

Ethics approval(s)
Oxford REC C, 15/07/2015, ref: 15/SC/0316

Study design
Randomised controlled trial

Primary study design
Interventional

Study type(s)
Treatment

Health condition(s) or problem(s) studied
Topic: Injuries and Emergencies, Haematology; Subtopic: Injuries and Emergencies (All Subtopics), Haematology (All Subtopics); Disease: Injuries and Emergencies, Non-malignant Haematology

Interventions
Early supplementation of Fibrinogen concentrate (FgC) in patients with major traumatic haemorrhage. Patients will be randomised to receive either 6g fibrinogen concentrate or placebo within 45 minutes of admission to hospital.

Intervention Type
Other

Primary outcome(s)
Current primary outcome measure as of 24/08/2018:
1. Mean fibrinogen levels over time by treatment arm at admission, At 2 hours from admission during first active haemorrhage and 7 days from admission

Previous primary outcome measures:
1. Feasibility of administering fibrinogen concentrate within 45 minutes of admission.
2. Proportion of patients with at least one Clauss fibrinogen level ≥ 2 g/L during active haemorrhage.

Key secondary outcome(s)
Current secondary outcome measure as of 24/08/2018:
1. Transfusion volumes, in numbers of units, for red cells, plasma, platelets and cryoprecipitate at 3, 6 hours and 24 hours from admission

Previous secondary outcome measures:
1. Transfusion volumes, in numbers of units, for red cells, plasma, platelets and cryoprecipitate at 3, 6 hours and 24 hours from admission

2. Clauss fibrinogen levels at day 7 post randomisation
3. ROTEM measures of coagulation (EXTEM and FIBTEM, where available) to day 7 post randomisation
4. Thrombotic events: clinically apparent venous thromboembolism (DVT, PE) and arterial events (MI, stroke) to day 28 from randomisation
5. Duration of and/or requirement for organ support to day 28 from admission, as defined by the CTCOFR score
6. All-cause mortality (including death from bleeding) at 3, 6 and 24 hours and up to day 28 from admission. Mortality at 1 year by longer term follow up
7. Hospital stay including ICU/HDU stay
8. Quality of life at 28 day from admission
9. Proportion of patients achieving haemostasis at 3 hours from admission (defined using a trial specific haemorrhage assessment tool)

Completion date
30/04/2017

Eligibility

Key inclusion criteria
1. Written informed consent or agreement, or waiver of consent, is obtained before any study related activity
2. The participant is judged to be an adult (aged 16 years or over) and is affected by traumatic injury
3. The participant is deemed by the attending clinician to have ongoing active haemorrhage with shock
AND REQUIRES:
4. Activation of the local major haemorrhage protocol for management of severe blood loss and /or transfusion of emergency (Group O) red cells

Participant type(s)
Patient

Healthy volunteers allowed
No

Age group
Adult

Sex
All

Key exclusion criteria
1. The participant has been transferred from another hospital
2. The trauma team leader deems the patient inappropriate for the trial i.e. injuries deemed to be incompatible with life
3. More than 3 hours have elapsed from the time of injury
4. The participant is pregnant
5. Severe isolated TBI or unsalvageable head injury

Date of first enrolment

01/10/2015

Date of final enrolment
31/03/2017

Locations

Countries of recruitment
United Kingdom

England

Scotland

Study participating centre
John Radcliffe Hospital (lead centre)
Oxford
United Kingdom
OX3 9DU

Study participating centre
Royal London Hospital
London
United Kingdom
E1 1BB

Study participating centre
Southampton General Hospital
Southampton
United Kingdom
SO16 6YD

Study participating centre
Edinburgh Royal Infirmary
Edinburgh
United Kingdom
EH16 4SA

Sponsor information

Organisation
NHS Blood and Transplant (NHSBT)

ROR
https://ror.org/0227qpa16

Funder(s)

Funder type
Industry

Funder Name
CSL Behring

Alternative Name(s)
CSL Behring LLC, CSL Behring GmbH, CSL

Funding Body Type
Private sector organisation

Funding Body Subtype
For-profit companies (industry)

Location
United States of America

Results and Publications

Individual participant data (IPD) sharing plan

IPD sharing plan summary
Available on request

Study outputs

Output type	Details	Date created	Date added	Peer reviewed?	Patient-facing?
Results article	results	18/06/2018		Yes	No
Protocol article		26/05/2017	12/09/2023	Yes	No
Basic results		24/08/2018	24/08/2018	No	No
HRA research summary			28/06/2023	No	No