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Fibrinogen concentrate versus placebo for treatment of postpartum haemorrhage: Obstetrics Bleeding Study 2

Submission date
04/06/2013

Recruitment status
No longer recruiting

Registration date
01/07/2013

Overall study status
Completed

Last Edited
24/07/2019

Condition category
Pregnancy and Childbirth

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

Plain English summary of protocol

Background and study aims
Bleeding at the time of childbirth (postpartum haemorrhage, PPH) is a major cause of death. Bleeding is caused when the uterus fails to contract or by operations. This is made worse by damage of blood clotting system. A number of studies have shown that low levels of a blood clotting factor called fibrinogen is associated with worse bleeding, the need for surgical measures and the need for blood transfusion (taking blood from one person and giving to other). The aim of this study is to find out whether giving fibrinogen early during bleeding at the time of childbirth reduces blood loss.

Who can participate?
Women experiencing major postpartum haemorrhage (PPH) can participate in this study.

What does the study involve?
Participating women are randomly allocated to one of two groups. One group receives fibrinogen concentrate injected into the vein and the other group receives a placebo (dummy). All participants are contacted via telephone after 6 weeks by a midwife.

What are the possible benefits and risks of participating?
It is hoped that giving fibrinogen will reduce blood loss, so there may be a benefit to the participant from taking part in this study. It is hoped that the results may help to improve the treatment of women who experience similar blood loss at the time of childbirth in the future. Fibrinogen is not a new treatment and it has been used in patients who have low levels of fibrinogen for many years, but its use in bleeding at the time of childbirth is relatively new. There is no evidence to suggest that fibrinogen has any serious side effects when used during childbirth but, because it is not routinely used at this time, we may not know all the possible side effects. The idea of giving women fibrinogen is to thicken the blood to stop bleeding but it is possible that this may cause clots where they are not needed and we will be especially looking for this.

Where is the study run from?
The study will be run from four centres in the UK: Cardiff and Vale University Health Board, Leicester Royal Infirmary, University College Hospital London and Liverpool Women's Hospital NHS Foundation Trust.

When is the study starting and how long is it expected to run for?
June 2013 to September 2014

Who is funding the study?
CSL Behring (UK)

Who is the main contact?
Dr Peter Collins
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Contact information

Type(s)
Scientific

Contact name
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Additional identifiers

Clinical Trials Information System (CTIS)
2012-005511-11

Protocol serial number
SPON 1155-12

Study information

Scientific Title
Fibrinogen concentrate versus placebo for treatment of postpartum haemorrhage: a multicentre, prospective, double blind randomised controlled trial

Acronym
OBS2

Study objectives

Infusion of fibrinogen concentrate early during a moderately severe and ongoing postpartum haemorrhage, in women with a reduced fibrinogen, as measured by the FIBTEM A5 test, will reduce the total number of allogeneic blood products (red blood cells, fresh frozen plasma, platelet concentrates and cryoprecipitate) transfused after study medication until discharge.

Ethics approval required
Old ethics approval format

Ethics approval(s)
Scotland A Research Ethics Committee, 26/03/2013, ref: 13/SS/0008

Study design
Prospective randomised double-blind placebo-controlled trial

Primary study design
Interventional

Study type(s)
Treatment

Health condition(s) or problem(s) studied
Reproductive Health & Childbirth

Interventions
Participants randomised to receive either a bolus infusion of fibrinogen concentrate or placebo. Fibrinogen concentrate will be supplied as a lyophilised powder in glass bottles each containing 1 gm of fibrinogen. The fibrinogen will be dissolved in 50 mL of sterile water before infusion. The matching placebo will be an equal volume of normal saline.
Dose: Between 2 g and 8 g (administered intravenously) depending on the ideal weight for height of the woman and measured Fibtem level. Women who are randomised to receive fibrinogen concentrate or placebo will be contacted by telephone after 6 weeks by a research midwife or other study team member.

Intervention Type
Other

Phase
Not Applicable

Primary outcome(s)
The total number of allogeneic blood products (red blood cells + fresh frozen plasma (FFP) + cryoprecipitate + platelets) transfused after study medication until discharge, compared to placebo.

Key secondary outcome(s))
To explore the effect of fibrinogen concentrate infusion on the following efficacy endpoints:
1. The proportion of women receiving no allogeneic blood products until discharge and within 24 hours after study medication
2. The number of units of red blood cells, FFP, platelets and cryoprecipitate transfused within 24 hours after study medication and until discharge
3. The measured abnormal blood loss within 24 hours after study medication and until discharge

4. The change in Clauss fibrinogen and FIBTEM parameters before and 15 minutes and 24 hours after the study medication
5. The proportion of women requiring cryoprecipitate or fibrinogen concentrate as subsequent therapy within 24 hours after study medication and until discharge
6. The proportion of women requiring invasive procedures (return to theatre, uterine brace sutures, uterine tamponade balloons, radiology intervention and hysterectomy) and the time of this intervention within 24 hours after study medication and until discharge
7. Incidence , duration and reasons for not exclusive breastfeeding

To explore the effect of fibrinogen concentrate infusion on following safety endpoints:
1. The proportion of women requiring ITU/HDU admission and length of stay
2. The total length of hospital stay
3. The incidence of clinically diagnosed arterial and venous thromboembolism within 6 weeks of study medication

Completion date
26/11/2015

Eligibility

Key inclusion criteria
1. Age 18 years or over
2. Women should have any one of the following within the first 12 hours after delivery:
2.1. Haemorrhage of about 1500 ml and ongoing bleeding without another complication
2.2. Haemorrhage of about 1000 mL and ongoing bleeding with any of:
2.2.1. caesarean section
2.2.2. uterine atony
2.2.3. placental abruption*
2.2.4. placenta praevia
2.2.5. Cardiovascular instability (arterial blood pressure below 90 mm/Hg and heart rate greater than 100 bpm)
2.2.6. Clinical observation of microvascular oozing
* If in the event of a placental abruption, women may be recruited if there is less than 1000ml visible blood loss, because bleeding at the time of abruption maybe concealed.
3. Women can be included if they fulfil the inclusion criteria after delivery of the baby but where the bleeding had started in the antenatal period (antepartum haemorrhage)
4. Women can be included where there is a slow accumulation of on-going blood loss (in the first 12 hours after delivery) if they fulfil the inclusion criteria

Participant type(s)
Patient

Healthy volunteers allowed
No

Age group
Adult

Lower age limit
18 years

Sex
Female

Key exclusion criteria
1. Women who have documented that they do not want to participate in the study during the antenatal period
2. Women declining infusion of red blood cells or blood components
3. Known inherited bleeding disorder
4. Placenta accreta diagnosed antenatally
5. Women who have already received uterine brace sutures, uterine tamponade balloons, radiology intervention or hysterectomy before entering the study
6. Clinical suspicion of amniotic fluid embolism
7. Secondary postpartum haemorrhage (haemorrhage which starts >12 hours after delivery)

Date of first enrolment
01/06/2013

Date of final enrolment
30/09/2014

Locations

Countries of recruitment
United Kingdom

Wales

Study participating centre
Cardiff University
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Sponsor information

Organisation
Cardiff University (UK)

ROR
https://ror.org/03kk7td41

Funder(s)

Funder type
Industry

Funder Name
CSL Behring (UK)

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	01/09/2017		Yes	No
Results article	results	01/09/2017		Yes	No
Protocol article	protocol	17/04/2015		Yes	No
HRA research summary			28/06/2023	No	No
Participant information sheet	Participant information sheet	11/11/2025	11/11/2025	No	Yes