

Enteral LactoFerrin In Neonates

Submission date 05/06/2013	Recruitment status No longer recruiting	☒ Prospectively registered ☐ Protocol
Registration date 13/06/2013	Overall study status Completed	☐ Statistical analysis plan ☒ Results
Last Edited 14/01/2019	Condition category Digestive System	☐ Individual participant data

Plain English summary of protocol

Background and study aims

About 20% of very preterm infants (born before 32 weeks) acquire a serious infection. These infants are more likely to develop other problems including severe lung and bowel conditions, and have a higher risk of dying or being disabled. Better methods of preventing infection in very preterm infants are needed. This study will test whether giving them supplemental lactoferrin (a natural antibiotic protein from cow's milk) reduces the number of serious infections.

Who can participate?

We will invite participation from 2,200 very preterm infants (<32 weeks) cared for in neonatal units across the UK.

What does the study involve?

Parents will be offered information about the study and will have 72 hours to consider and give their informed consent. Infants will be randomly allocated to receive either lactoferrin or placebo (dummy) mixed with their milk. Neither doctors nor parents will be aware of what supplement the infants will receive. Treatment will continue until the infants are no longer at high risk of acquiring serious infections. As well as comparing serious infection rates between the two groups, we will also assess what effects this supplement has on the risk of other serious diseases and death, on the need for infants to receive multiple or prolonged courses of antibiotics and on the length of hospital stay.

What are the possible benefits and risks of participating?

There will be no immediate direct benefit to those taking part in the study. However, there should be benefits to future very preterm babies as the results of the study are likely to influence the NHS policy and practice.

Where is the study run from?

The study is run from the National Perinatal Epidemiology Unit Clinical Trials Unit, at the University of Oxford, UK.

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

Recruitment will start with six centres in the North of England, as part of a planned 9-month pilot, in September 2013. Following this, the study will be opened in further centres in England, Scotland and Northern Ireland and continue to recruit for a further three years.

Who is funding the study?
The National Institute for Health Research's Health Technology Assessment Programme (NIHR HTA)
has provided the funding for the study.

Who is the main contact?
Chief Investigator, Professor William McGuire: William.McGuire@hyms.ac.uk
Trial Co-ordinator, James Griffiths: james.griffiths@npeu.ox.ac.uk

Contact information

Type(s)
Scientific

Contact name
Prof William McGuire

Contact details
Centre for Reviews and Dissemination
Hull York Medical School and University of York
York
United Kingdom
YO10 5DD
01904 321057
william.mcguire@hyms.ac.uk

Additional identifiers

Clinical Trials Information System (CTIS)
2012-004260-22

Protocol serial number
ELFIN01

Study information

Scientific Title
A multi-centre randomised placebo-controlled trial of prophylactic enteral lactoferrin supplementation to prevent late-onset invasive infection in very preterm infants

Acronym
ELFIN

Study objectives
It is hypothesised that the proportion of very preterm (<32 weeks postmenstrual age) infants with at least one episode of late-onset invasive infection by the time of discharge from hospital will be lower in the lactoferrin group versus the placebo group

Ethics approval required

Old ethics approval format

Ethics approval(s)

National Research Ethics Service (NRES) Committee East Midlands - Nottingham 2, Ref: 13/EM/0118, Date: 02/04/2013

Primary study design

Interventional

Study design

Phase III multi-centre placebo-controlled randomised controlled trial

Study type(s)

Prevention

Health condition(s) or problem(s) studied

Preterm infants, necrotising enterocolitis, late-onset invasive infection, lactoferrin

Interventions

Infants will be randomly allocated to receive either lactoferrin (150 mg/kg/day to a maximum of 300 mg) or placebo. Until discharge they will be monitored for late-onset invasive infection, necrotising enterocolitis, bronchopulmonary dysplasia, retinopathy of prematurity, length of hospital stay and length of time in intensive care.

Intervention Type

Drug

Phase

Phase III

Drug/device/biological/vaccine name(s)

Lactoferrin

Primary outcome(s)

The incidence of microbiologically-confirmed or clinically suspected late-onset infection from trial entry until hospital discharge. Clinicians will record whether or not infants have been treated for late-onset infection on the data collection form, however we are not recording specific test results.

Key secondary outcome(s)

1. All-cause mortality prior to hospital discharge
2. Necrotising enterocolitis (NEC): Bell's stage II or III
3. Severe retinopathy of prematurity (ROP) treated medically or surgically
4. Bronchopulmonary dysplasia (BPD): infant is still receiving mechanical ventilator support or supplemental oxygen at 36 weeks' postmenstrual age
5. A composite of invasive infection, major morbidity (NEC, ROP, or BPD as defined above) and mortality
6. Total number of days of administration of antibiotics per infant from 72 hours until death or discharge from hospital

7. Total number of days of administration of antifungal agents per infant
8. Total length of stay until discharge home
9. Length of stay in (i) intensive care, (ii) high dependency care, (iii) special care

Completion date

31/05/2018

Eligibility

Key inclusion criteria

Infants will be eligible to participate if:

1. Gestational age at birth is less than 32 weeks
2. Less than 72 hours old
3. Written informed parental consent is obtained

If infants are receiving antibiotic treatment for suspected or confirmed Infection, they are still eligible for recruitment.

Participant type(s)

Patient

Healthy volunteers allowed

No

Age group

Neonate

Sex

All

Key exclusion criteria

1. Infants with severe congenital anomalies
2. Anticipated enteral fasting of more than 14 days
3. Infants who, in the opinion of the treating clinician, have no realistic prospect of survival

Date of first enrolment

01/09/2013

Date of final enrolment

28/09/2017

Locations

Countries of recruitment

United Kingdom

England

Study participating centre
Hull York Medical School and University of York
York
United Kingdom
YO10 5DD

Sponsor information

Organisation
University of Oxford (UK)

ROR
<https://ror.org/052gg0110>

Funder(s)

Funder type
Government

Funder Name
National Institute for Health Research (NIHR) Health Technology Assessment Programme (HTA)
(ref: 10/57/14)

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	01/12/2018		Yes	No
Results article	results	02/02/2019		Yes	No
HRA research summary			28/06/2023	No	No
Study website	Study website	11/11/2025	11/11/2025	No	Yes