

Can High Flow Nasal Prongs therapy facilitate earlier establishment of full oral feeds in babies who are Nasal Continuous Positive Airway Pressure dependent at 32 weeks gestation?

Submission date 29/01/2013	Recruitment status No longer recruiting	<input type="checkbox"/> Prospectively registered
		<input type="checkbox"/> Protocol
Registration date 14/03/2013	Overall study status Completed	<input type="checkbox"/> Statistical analysis plan
		<input checked="" type="checkbox"/> Results
Last Edited 17/12/2020	Condition category Pregnancy and Childbirth	<input type="checkbox"/> Individual participant data

Plain English summary of protocol

Background and study aims

Respiratory Distress Syndrome (RDS) is a common condition in preterm infants. NCPAP (Nasal Continuous Positive Airway Pressure) is a method of ventilatory support used for these infants. It provides a continuous flow and pressure of air/ oxygen through the airways into the air sacs to prevent them collapsing during expiration and reducing the work of breathing. However it is a cumbersome mask, and it can disrupt the facilitation of breast or bottle feeding when they would otherwise be ready for it.

High Flow Nasal Prong (HFNP) therapy provides a high flow of air/ oxygen through the airways and into the air sacs. This is done through smaller nasal prongs, which cause less obstruction. Our objective is to show that when infants are ready to feed, they are more likely to feed successfully if they have the small nasal prongs as opposed to a larger mask. We aim to show that using the high flow nasal prong therapy will help them to feed sooner and to be feeding fully on breast/bottle 1 week earlier than those on NCPAP.

Who can participate?

1. Very Low Birth Weight Infants (1500g or less)
2. Born at less than 30 weeks gestation (24+0 to 29+6)
3. Neonates requiring respiratory support in the form of NCPAP at 32 weeks corrected gestational age with an oxygen requirements of less than 30%
4. Infants requiring positive end expiratory pressure (PEEP)<5 cm H₂O and breathing in room air will first be offered a trial off NCPAP with no respiratory support, but if this fails they will then be eligible for randomization
5. Full enteral feeding (tube feeding)

What does the study involve?

Once eligible for the study, at 32 weeks corrected gestational age, the infant will be randomly allocated to one of two groups A or B, using a sealed envelope.

Group A will continue on NCPAP and Group B will be started on High Flow nasal prongs at 7L

/min.

Both groups will receive the same 4 hourly observation monitoring.

We have estimated that we will need to recruit 22 babies in each group (total 44 infants).

We will follow them until they reach full bottle/breast feeds.

What are the possible risks and benefits from participating?

There are no specific risks or benefits from participating.

Side effects of High flow nasal prong therapy may be clinical deterioration of the infant which will be assessed by the senior doctor on call and if needed, the infant will be resumed on NCPAP.

A possible benefit of the HFNP therapy would reaching full bottle/breast feeds earlier.

Where is the study run from?

The neonatal unit in the Coombe Women and Infants University Hospital, Dublin 8, Ireland is running this study.

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

The study is starting in February 2013 and is expected to run for 12 to 18 months.

Who is funding the study?

Coombe Women and Infants University Hospital, Ireland

Who is the Main contact?

Dr. Jan Miletin

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Contact information

Type(s)

Scientific

Contact name

Dr Jan Miletin

Contact details

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Additional identifiers

Protocol serial number

N/A

Study information

Scientific Title

High Flow Nasal Prongs (HFNP) therapy versus Nasal Continuous Positive Airway Pressure (NCPAP) in establishing full oral feeds in Very Low Birth Weight (VLBW) infants - randomized controlled trial

Acronym

HiFlow

Study objectives

We hypothesize that infants on HFNP therapy will be established on full feeds 1 week earlier than infants on NCPAP.

Null hypothesis: is that there is no difference or less than 1 week difference between the two groups.

Ethics approval required

Old ethics approval format

Ethics approval(s)

Research Ethics Committee, Coombe Women and Infants University Hospital, Dublin, Ireland approved on the 27th of November 2012, ref: 18 - 2012

Study design

Randomized controlled parallel group trial

Primary study design

Interventional

Study type(s)

Treatment

Health condition(s) or problem(s) studied

Establishment of full oral bottle / breast feeding in preterm infants

Interventions

Intervention Group: Use of High Flow Nasal Prongs therapy starting at 32 weeks of corrected gestational age

Control Group: Use of Nasal Continuous Positive Airway Pressure at 32 weeks of gestation (current practice)

Intervention Type

Other

Phase

Not Applicable

Primary outcome(s)

The establishment of full oral feeding - days from 32 weeks corrected gestational age

Key secondary outcome(s)

Duration of respiratory support - days from 32 weeks corrected gestational age

Completion date

01/07/2014

Eligibility

Key inclusion criteria

1. Very Low Birth Weight Infants (1500g or less)
2. Born at less than 30 weeks gestation (24+0 to 29+6)
3. Neonates requiring respiratory support in the form of NCPAP at 32 weeks corrected gestational age with an oxygen requirements of less than 30%
4. Infants requiring positive end expiratory pressure (PEEP)<5 cm H₂O and breathing in room air will first be offered a trial off NCPAP with no respiratory support, but if this fails they will then be eligible for randomization
5. Full enteral feeding (by nasogastric or orogastric tube)

Participant type(s)

Patient

Healthy volunteers allowed

No

Age group

Neonate

Sex

All

Total final enrolment

44

Key exclusion criteria

Significant congenital / respiratory / cardiac / airway abnormality at the time of randomization

Date of first enrolment

01/02/2013

Date of final enrolment

01/07/2014

Locations

Countries of recruitment

Ireland

Study participating centre

Coombe Women and Infants University Hospital

Dublin

Ireland
D 8

Sponsor information

Organisation

Coombe Women and Infants University Hospital (Ireland)

ROR

<https://ror.org/00bx71042>

Funder(s)

Funder type

Hospital/treatment centre

Funder Name

Coombe Women and Infants University Hospital (Ireland)

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	01/07/2017	17/12/2020	Yes	No
Participant information sheet	Participant information sheet	11/11/2025	11/11/2025	No	Yes