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Effect of palivizumab on wheezing after respiratory syncytial virus (RSV) infection

Submission date	Recruitment status	[_] Prospectively registered
21/11/2008	No longer recruiting	[_] Protocol
Registration date	**Overall study status**	[_] Statistical analysis plan
23/01/2009	Completed	[X] Results
Last Edited	**Condition category**	[_] Individual participant data
24/03/2020	Respiratory	

Plain English summary of protocol

Background and study aims
Respiratory syncytial virus (RSV) is a very common virus that leads to mild, cold-like symptoms in adults and older healthy children. It is not known whether recurrent wheezing in preterm children is caused by RSV infection, or whether RSV infection is just the first indication of chronic airway disease that would develop anyway. This study aims to find out by investigating whether prevention of RSV using the drug palivizumab results in a decreased incidence of recurrent wheeze.

Who can participate?
Healthy preterm infants (gestational age between 32 and 35 weeks)

What does the study involve?
Infants are randomly allocated to receive one-monthly intramuscular injections (into a muscle) of either palivizumab or a placebo (dummy) drug from discharge until the end of the RSV season, with a maximum of five injections. Number of wheezing days are recorded during the first year of life, and questionnaires are completed at age 1, 3 and 6 years. Throat swabs are taken for viral analysis during the RSV season in case of a runny nose or mild cough. These samples are tested for viruses, to determine whether the child is infected with RSV and/or other viruses. Lung function is tested and asthma-related breathing symptoms are measured by questionnaire at age 6 years.

What are the possible benefits and risks of participating?
Not provided at time of registration

Where is the study run from?
University Medical Centre Utrecht (UMCU) (Netherlands)

When is the study starting and how long is it expected to run for?
August 2008 to April 2017

Who is funding the study?
Abbott International plc (UK)

Who is the main contact?
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Contact information

Type(s)
Scientific

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Additional identifiers

Protocol serial number
NTR1023

Study information

Scientific Title
Effect of palivizumab on respiratory syncytial virus-associated burden of disease: a randomised controlled trial [Effect van palivizumab op lange termijn gevolgen veroorzaakt door het respiratoir syncytieel virus: een gerandomiseerde placebo-gecontroleerd onderzoek]

Acronym
MAKI

Study objectives
It is not known whether recurrent wheeze in preterm children is caused by respiratory syncytial virus (RSV) infection (serial hypothesis) or that RSV infection is the first indication of chronic airway morbidity that would develop anyway (parallel hypothesis). This study aims to distinguish between these two hypotheses by investigating whether prevention of RSV (by palivizumab) results in decreased incidence of recurrent wheeze.

Ethics approval required
Old ethics approval format

Ethics approval(s)
Medisch Ethische Toetsingscommissie (METC) of the Universitair Medisch Centrum Utrecht, 21 /07/2008

Study design
Double-blind randomised placebo-controlled multicentre trial with single-blind follow-up study 6 years hereafter

Primary study design
Interventional

Study type(s)
Treatment

Health condition(s) or problem(s) studied
Respiratory syncytial virus bronchiolitis and post-bronchiolitis wheezing

Interventions
Infants will receive one-monthly intramuscular palivizumab 15 mg/kg or placebo from discharge until the end of the RSV season with a maximum of five injections.

Intervention Type
Drug

Phase
Not Applicable

Drug/device/biological/vaccine name(s)
Palivizumab

Primary outcome(s)
Number of wheezing days during the first year of life

Key secondary outcome(s))
1. Questionnaire-reported wheezing, health-related quality of life and health-economic consequences of RSV at age 1, 3 and 6 years
2. Nasopharyngeal swabs for viral analysis during the RSV season in case of a runny nose or mild cough. These samples will be tested for viruses, to determine if the child is infected with RSV and /or other viruses. It is emphasised that RSV infection is not part of the endpoint of this study.

Added 27/06/2014:
3. Lung function at age 6 years
4. Questionnaire-reported asthma-related respiratory symptoms (ISAAC questionnaire) at age 6 years

Updated 07/03/2017:
3. Lung function measured by spirometry at age 6 years with FEV0.5 as primary endpoint
4. Asthma-related respiratory symptoms measured by ISAAC questionnaire at age 6 years with current asthma as primary endpoint. Current asthma is defined as wheeze in the past 12 months and/or use of asthma medication in the past 12 months

Completion date
01/04/2017

Eligibility

Key inclusion criteria
1. Healthy preterm infants
2. Gestational age between 32 and 35 weeks, either sex
3. Children of parents who master the Dutch language

Participant type(s)
Healthy volunteer

Healthy volunteers allowed
No

Age group
Child

Sex
All

Total final enrolment
429

Key exclusion criteria
1. A known cardiac anomaly, Down's syndrome or other serious congenital disorders
2. Require intensive respiratory treatment, defined as surfactant treatment or at least 2 weeks of mechanical ventilation
3. Greater than 6 months of age at the start of the RSV season, defined as 1st October of the year of birth
4. Airway morbidity before the start of the RSV season, monitored before the first injection

Date of first enrolment
01/08/2008

Date of final enrolment
01/04/2017

Locations

Countries of recruitment
Netherlands

Study participating centre
Lundlaan 6
Utrecht
Netherlands
3584 EA

Sponsor information

Organisation
University Medical Centre Utrecht (UMCU) (Netherlands)

ROR
https://ror.org/04pp8hn57

Funder(s)

Funder type
Industry

Funder Name
Abbott International plc (UK) - no restrictions for publication of the research data

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	09/05/2013		Yes	No
Results article	results	01/04/2018		Yes	No
Results article	results	01/10/2020	24/03/2020	Yes	No