Clinical trial results:
High Dose Antioxidant Treatment for Patients with Cystic Fibrosis

Summary

EudraCT number	2013-005481-19
Trial protocol	DK
Global end of trial date	30 September 2015

Results information

Result version number	v1 (current)
This version publication date	22 June 2016
First version publication date	22 June 2016

Trial information

Trial identification

Sponsor protocol code	2013-01

Additional study identifiers

ISRCTN number	-
ClinicalTrials.gov id (NCT number)	-
WHO universal trial number (UTN)	-

Notes:

Sponsors

Sponsor organisation name	Aarhus University Hospital
Sponsor organisation address	Brendstrupsgaardvej 100, Aarhus N, Denmark, 8200
Public contact	Pediatric Department A, Aarhus University Hospital, peschi@rm.dk
Scientific contact	Pediatric Department A, Aarhus University Hospital, peschi@rm.dk

Notes:

Paediatric regulatory details

Is trial part of an agreed paediatric investigation plan (PIP)	No
Does article 45 of REGULATION (EC) No 1901/2006 apply to this trial?	No
Does article 46 of REGULATION (EC) No 1901/2006 apply to this trial?	No

Notes:

Results analysis stage

Analysis stage	Final
Date of interim/final analysis	30 September 2015
Is this the analysis of the primary completion data?	Yes
Primary completion date	30 September 2015
Global end of trial reached?	Yes
Global end of trial date	30 September 2015
Was the trial ended prematurely?	No

Notes:

General information about the trial

Main objective of the trial:

To evaluate if high dose antioxdant treatment (per oral and inhalation) can inhibit the oxidativ stress mediated inflammation in cystic fibrosis patients lung. The inflammation with neutrophil leucocytes is monitored by Pet/CT scan

Protection of trial subjects:

To minimize pain in relation to blood sampling the patients were offered local anestetics. No other measures were taken

Background therapy:

Pancreatic enzymes - vitamin supplementation- PEP mask theraphy- pulmozyme inhalation

Evidence for comparator: -

Actual start date of recruitment	01 May 2014
Long term follow-up planned	No
Independent data monitoring committee (IDMC) involvement?	No

Notes:

Population of trial subjects

Subjects enrolled per country

Country: Number of subjects enrolled	Denmark: 11
Worldwide total number of subjects	11
EEA total number of subjects	11

Notes:

Subjects enrolled per age group

In utero	0
Preterm newborn - gestational age < 37 wk	0
Newborns (0-27 days)	0
Infants and toddlers (28 days-23 months)	0
Children (2-11 years)	3
Adolescents (12-17 years)	8
Adults (18-64 years)	0
From 65 to 84 years	0
85 years and over	0

Subject disposition

Recruitment

Recruitment details:

Patients were contacted during rutine control visits in the outpatient Clinic and asked if they wanted to participate. Recruitement period August 2014 - April 2015

Pre-assignment

Screening details:

14 pts. were screened. 2 did not want to participate and one suffered from liver disease and had to be excluded.

Period 1

Period 1 title	Overall trial (overall period)
Is this the baseline period?	Yes
Allocation method	Non-randomised - controlled
Blinding used	Not blinded

Arms

Arm title	medical intervention

Arm description:

All patients had the same run in period where they should be clinically stable and with out anti inflammatory treatment , then scan and tests were performed and there after they recieved Medical intervention (N acetylcysteine) for 14 dys. All tests were then repeated and the trial was over.

Arm type	Experimental
Investigational medicinal product name	Mucomyst or ACC
Investigational medicinal product code	
Other name	
Pharmaceutical forms	Effervescent tablet, Tablet
Routes of administration	Oral use

Dosage and administration details:

100 mg/kg/24hrs in 3 divided doses given per oral. The patients decided themselves whether they wanted mucomyst or ACC

Investigational medicinal product name	Glutathione (TAD)
Investigational medicinal product code	
Other name	
Pharmaceutical forms	Inhalation vapour, solution
Routes of administration	Intrapulmonary use

Dosage and administration details:

Inhalations were given 2 times daily 600 mg x2

Number of subjects in period 1	medical intervention
Started	11
Completed	11

Baseline characteristics

Reporting groups	
Reporting group title	Overall trial

Reporting group description: -

Reporting group values	Overall trial	Total	
Number of subjects	11	11	
Age categorical Units: Subjects			
In utero	0	0	
Preterm newborn infants (gestational age < 37 wks)	0	0	
Newborns (0-27 days)	0	0	
Infants and toddlers (28 days-23 months)	0	0	
Children (2-11 years)	3	3	
Adolescents (12-17 years)	8	8	
Adults (18-64 years)	0	0	
From 65-84 years	0	0	
85 years and over	0	0	
Gender categorical Units: Subjects			
Female	6	6	
Male	5	5	
Genotypic verified cystic fibrosis Units: Subjects			
CF Genotype	11	11	
Pulmonary status Units: Subjects			
Forced vital capacity > 75%	11	11	
clinical status Units: Subjects			
clinically stable	11	11	

End points

End points reporting groups

Reporting group title	medical intervention

Reporting group description:

All patients had the same run in period where they should be clinically stable and with out anti inflammatory treatment , then scan and tests were performed and there after they recieved Medical intervention (N acetylcysteine) for 14 dys. All tests were then repeated and the trial was over.

Subject analysis set title	Post treatment
Subject analysis set type	Per protocol

Subject analysis set description:

Post treatment

Primary: neutrophil metabolic activity

End point title	neutrophil metabolic activity

End point description:

PET-CT scan was carried out 60 minutes after iv injection of 18 F-FDG injection and patient was scanned 6 mins over parts of the lung of interest.

End point type	Primary

End point timeframe:

Pet CT scan was performed early on the day when antioxidant theraphy was begun and Again 14 days later.

End point values	medical intervention	Post treatment		
Subject group type	Reporting group	Subject analysis set		
Number of subjects analysed	7[1]	7		
Units: Standard uptake values (SUV)				
median (full range (min-max))	0.33 (0.27 to 0.48)	0.36 (0.26 to 0.48)		

Notes:

[1] - 4 patients did not complete the trial. Pre-post pairs are included.

Statistical analyses

Statistical analysis title	Wilcoxon signed rank test
Comparison groups	medical intervention v Post treatment
Number of subjects included in analysis	14
Analysis specification	Pre-specified
Analysis type	other
P-value	< 0.001
Method	Wilcoxon (Mann-Whitney)

Adverse events

Adverse events information

Timeframe for reporting adverse events:

2 weeks.

Adverse event reporting additional description:

patients diaries, Anamnestic review at the final visit with investigator. Blood tests and physical examination.

Assessment type	Systematic

Dictionary used

Dictionary name	MedDRA
Dictionary version	19

Reporting groups

Reporting group title	1medical intervention

Reporting group description:

All patients had the same run in period where they should be clinically stable and with out anti inflammatory treatment , then scan and tests were performed and there after they recieved Medical intervention (N acetylcysteine) for 14 dys. All tests were then repeated and the trial was over.

Serious adverse events	1medical intervention		
Total subjects affected by serious adverse events			
subjects affected / exposed	0 / 11 (0.00%)		
number of deaths (all causes)	0		
number of deaths resulting from adverse events	0		

Frequency threshold for reporting non-serious adverse events: 5 %

Non-serious adverse events	1medical intervention		
Total subjects affected by non-serious adverse events			
subjects affected / exposed	2 / 11 (18.18%)		
Gastrointestinal disorders			
Diarrhoea	Additional description: One day with diarrhoea		
subjects affected / exposed	1 / 11 (9.09%)		
occurrences (all)	1		
Infections and infestations			
common cold			
subjects affected / exposed	1 / 11 (9.09%)		
occurrences (all)	1		

More information

Substantial protocol amendments (globally)

Were there any global substantial amendments to the protocol? No

Interruptions (globally)

Were there any global interruptions to the trial? No

Limitations and caveats

None reported