# Clinical trial results:
# Small Particle Inhaled Steroids in Refractory Steroid-responsive Asthma

## Summary

| | |
|---|---|
| EudraCT number | 2010-018249-78 |
| Trial protocol | GB |
| Global end of trial date | 23 October 2013 |

**Results information**

| | |
|---|---|
| Result version number | v1 (current) |
| This version publication date | 14 February 2019 |
| First version publication date | 14 February 2019 |
| Summary attachment (see zip file) | A randomised controlled trial of small particle inhaled steroids in refractory eosinophilic asthma (SPIRA) (Spira_pub.pdf) |

## Trial information

**Trial identification**

| | |
|---|---|
| Sponsor protocol code | 09115 |

**Additional study identifiers**

| | |
|---|---|
| ISRCTN number | - |
| ClinicalTrials.gov id (NCT number) | NCT01171365 |
| WHO universal trial number (UTN) | - |

Notes:

**Sponsors**

| | |
|---|---|
| Sponsor organisation name | University of Nottingham |
| Sponsor organisation address | Jubilee Campus, Nottingham, United Kingdom, NG51PB |
| Public contact | Tim Harrison, University of Nottingham, 44 1158231714, tim.harrison@nottingham.ac.uk |
| Scientific contact | Tim Harrison, University of Nottingham, 44 8231714, tim.harrison@nottingham.ac.uk |

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 | 07 October 2014 |
| Is this the analysis of the primary completion data? | Yes |
| Primary completion date | 07 October 2013 |
| Global end of trial reached? | Yes |
| Global end of trial date | 23 October 2013 |
| Was the trial ended prematurely? | No |

Notes:

## General information about the trial

Main objective of the trial:

In patients with poorly controlled asthma with evidence of persistent eosinophilic inflammation can the addition of extra inhaled corticosteroid that targets the distal airways improve asthma control and reduce the eosinophilic airway inflammation?

The primary endpoint will be the difference in sputum eosinophil count between active and placebo groups at 8 weeks.

Protection of trial subjects:

N/A

Background therapy: -

Evidence for comparator: -

| | |
|---|---|
| Actual start date of recruitment | 01 December 2010 |
| 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 | United Kingdom: 30 |
| Worldwide total number of subjects | 30 |
| EEA total number of subjects | 30 |

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) | 0 |
| Adolescents (12-17 years) | 0 |
| Adults (18-64 years) | 30 |
| From 65 to 84 years | 0 |
| 85 years and over | 0 |

## Subject disposition

### Recruitment

Recruitment details:

Subjects with poorly controlled eosinophilic asthma

### Pre-assignment

Screening details:

ATS criteria for severe asthma

### Period 1

| | |
|---|---|
| Period 1 title | baseline (overall period) |
| Is this the baseline period? | Yes |
| Allocation method | Randomised - controlled |
| Blinding used | Double blind |
| Roles blinded | Subject, Investigator, Data analyst |

### Arms

| | |
|---|---|
| Are arms mutually exclusive? | Yes |
| **Arm title** | active |

Arm description:

ciclesonide

| | |
|---|---|
| Arm type | Experimental |
| Investigational medicinal product name | ciclesonide |
| Investigational medicinal product code | |
| Other name | |
| Pharmaceutical forms | Inhalation vapour |
| Routes of administration | Auricular use |

Dosage and administration details:

640 mcg/day

| | |
|---|---|
| **Arm title** | placebo |

Arm description: -

| | |
|---|---|
| Arm type | Placebo |
| Investigational medicinal product name | placebo |
| Investigational medicinal product code | |
| Other name | |
| Pharmaceutical forms | Inhalation vapour |
| Routes of administration | Auricular use |

Dosage and administration details:

as active

| **Number of subjects in period 1** | active | placebo |
|---|---|---|
| Started | 15 | 15 |
| Completed | 15 | 15 |

## Baseline characteristics

| Reporting groups | |
|---|---|
| Reporting group title | active |
| Reporting group description: ciclesonide | |
| Reporting group title | placebo |
| Reporting group description: - | |

| Reporting group values | active | placebo | Total |
|---|---|---|---|
| Number of subjects | 15 | 15 | 30 |
| Age categorical<br>Units: Subjects | | | |
| In utero | 0 | 0 | 0 |
| Preterm newborn infants (gestational age < 37 wks) | 0 | 0 | 0 |
| Newborns (0-27 days) | 0 | 0 | 0 |
| Infants and toddlers (28 days-23 months) | 0 | 0 | 0 |
| Children (2-11 years) | 0 | 0 | 0 |
| Adolescents (12-17 years) | 0 | 0 | 0 |
| Adults (18-64 years) | 0 | 15 | 15 |
| From 65-84 years | 15 | 0 | 15 |
| 85 years and over | 0 | 0 | 0 |
| Gender categorical<br>Units: Subjects | | | |
| Female | 7 | 7 | 14 |
| Male | 8 | 8 | 16 |

| Subject analysis sets | |
|---|---|
| Subject analysis set title | Active |
| Subject analysis set type | Intention-to-treat |
| Subject analysis set description: To compare high dose ciclesonide with placebo | |
| Subject analysis set title | placebo |
| Subject analysis set type | Intention-to-treat |
| Subject analysis set description: placebo control | |

| Reporting group values | Active | placebo | |
|---|---|---|---|
| Number of subjects | 15 | 15 | |
| Age categorical<br>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) | 0 | 0 | |
| Adolescents (12-17 years) | 0 | 0 | |
| Adults (18-64 years) | 15 | 15 | |
| From 65-84 years | 0 | 0 | |
| 85 years and over | 0 | 0 | |
| Gender categorical<br>Units: Subjects | | | |
| Female | 7 | 7 | |
| Male | 8 | 8 | |

## End points

### End points reporting groups

| | |
|---|---|
| Reporting group title | active |
| Reporting group description:<br>ciclesonide | |
| Reporting group title | placebo |
| Reporting group description: - | |
| Subject analysis set title | Active |
| Subject analysis set type | Intention-to-treat |
| Subject analysis set description:<br>To compare high dose ciclesonide with placebo | |
| Subject analysis set title | placebo |
| Subject analysis set type | Intention-to-treat |
| Subject analysis set description:<br>placebo control | |

### Primary: sputum eosinophils

| | |
|---|---|
| End point title | sputum eosinophils |
| End point description: | |
| End point type | Primary |
| End point timeframe:<br>week 8 | |

| End point values | active | placebo | Active | placebo |
|---|---|---|---|---|
| Subject group type | Reporting group | Reporting group | Subject analysis set | Subject analysis set |
| Number of subjects analysed | 15 | 15 | 15 | 15 |
| Units: percent | 15 | 15 | 15 | 15 |

### Statistical analyses

| Statistical analysis title | sputum cell counts |
|---|---|
| Comparison groups | placebo v Active |
| Number of subjects included in analysis | 30 |
| Analysis specification | Pre-specified |
| Analysis type | superiority |
| P-value | < 0.05 |
| Method | t-test, 2-sided |
| Parameter estimate | Median difference (final values) |

## Adverse events

| Adverse events information | |
|---|---|
| Timeframe for reporting adverse events: duration of study | |
| Assessment type | Non-systematic |
| **Dictionary used** | |
| Dictionary name | SNOMED CT |
| Dictionary version | 1 |
| **Reporting groups** | |
| Reporting group title | active |
| Reporting group description: - | |
| Reporting group title | placebo |
| Reporting group description: - | |

| Serious adverse events | active | placebo | |
|---|---|---|---|
| Total subjects affected by serious adverse events | | | |
| subjects affected / exposed | 0 / 15 (0.00%) | 0 / 15 (0.00%) | |
| number of deaths (all causes) | 0 | 0 | |
| number of deaths resulting from adverse events | 0 | 0 | |

Frequency threshold for reporting non-serious adverse events: 3 %

| Non-serious adverse events | active | placebo | |
|---|---|---|---|
| Total subjects affected by non-serious adverse events | | | |
| subjects affected / exposed | 0 / 15 (0.00%) | 3 / 15 (20.00%) | |
| Respiratory, thoracic and mediastinal disorders | | | |
| Wheezing | | | |
| subjects affected / exposed | 0 / 15 (0.00%) | 3 / 15 (20.00%) | |
| occurrences (all) | 0 | 3 | |

## 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

Limitations of the trial such as small numbers of subjects analysed or technical problems leading to unreliable data.

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|---|
| proxy measures of exacerbations |

Notes: