Clinical trial results:
Randomized, Placebo-Controlled Clinical Trial to Study the Efficacy and Safety of Inhaled Corticosteroid Plus Montelukast Compared with Inhaled Corticosteroid Therapy Alone in Patients with Chronic Asthma

Summary

EudraCT number	2007-006097-28
Trial protocol	GB
Global end of trial date	16 February 2009

Results information

Result version number	v1 (current)
This version publication date	13 April 2016
First version publication date	09 May 2015

Trial information

Trial identification

Sponsor protocol code	0476-386

Additional study identifiers

ISRCTN number	-
ClinicalTrials.gov id (NCT number)	NCT00666679
WHO universal trial number (UTN)	-
Other trial identifiers	MK-0476-386: Merck Registration

Notes:

Sponsors

Sponsor organisation name	Merck Sharp & Dohme Corp.
Sponsor organisation address	2000 Galloping Hill Road, Kenilworth, NJ, United States, 07033
Public contact	Clinical Trials Disclosure, Merck Sharp & Dohme Corp., ClinicalTrialsDisclosure@merck.com
Scientific contact	Clinical Trials Disclosure, Merck Sharp & Dohme Corp., ClinicalTrialsDisclosure@merck.com

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?	Yes

Notes:

Results analysis stage

Analysis stage	Final
Date of interim/final analysis	16 February 2009
Is this the analysis of the primary completion data?	Yes
Primary completion date	16 February 2009
Global end of trial reached?	Yes
Global end of trial date	16 February 2009
Was the trial ended prematurely?	No

Notes:

General information about the trial

Main objective of the trial:

1) To demonstrate that treatment with montelukast and mometasone (an inhaled corticosteroid), compared with mometasone alone, results in improvement in Forced Expiratory Volume in 1 Second (FEV1) in participants aged 15 to 85 years with chronic asthma; 2) To determine the safety and tolerability of montelukast and mometasone, compared with mometasone alone, in participants aged 15 to 85 years with chronic asthma.

Protection of trial subjects:

This study was conducted in conformance with Good Clinical Practice standards and applicable country and/or local statutes and regulations regarding ethical committee review, informed consent, and the protection of human subjects participating in biomedical research.

The following additional measure defined for this individual study was in place for the protection of trial subjects:
Subjects were provided with open-label inhaled corticosteroid (mometasone furoate) for asthma control throughout the study.

Background therapy:

Subjects were provided with open-label inhaled corticosteroid (mometasone furoate) for asthma control throughout the study.

Evidence for comparator: -

Actual start date of recruitment	15 April 2008
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	Canada: 11
Country: Number of subjects enrolled	Colombia: 9
Country: Number of subjects enrolled	Israel: 26
Country: Number of subjects enrolled	Peru: 55
Country: Number of subjects enrolled	United States: 33
Worldwide total number of subjects	134
EEA total number of subjects	0

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)	10
Adults (18-64 years)	115
From 65 to 84 years	9
85 years and over	0

Subject disposition

Recruitment

Recruitment details: -

Pre-assignment

Screening details:

Participants were screened who were nonsmoking males and females aged 15 to 85 years, had chronic asthma, had an FEV1 50-80% of predicted while withholding short-acting ß-agonist (SABA) and demonstrated reversibility of airway obstruction >12% following SABA administration.

Period 1

Period 1 title	Treatment Period 1
Is this the baseline period?	Yes
Allocation method	Randomised - controlled
Blinding used	Double blind
Roles blinded	Subject, Investigator, Monitor, Data analyst, Assessor

Arms

Are arms mutually exclusive?	Yes
Arm title	Montelukast+Mometasone then Placebo+Mometasone

Arm description:

Participants received montelukast 1 mg plus open-label mometasone 220 mcg by inhalation once daily for 2 weeks in Treatment Period 1 and received placebo plus open-label mometasone 220 mcg by inhalation once daily for 2 weeks in Treatment Period 2. Treatment Periods 1 and 2 were separated by a 1-week wash-out period during which all participants received open-label mometasone plus blinded placebo by inhalation.

Arm type	Experimental
Investigational medicinal product name	montelukast
Investigational medicinal product code	
Other name	MK-0476
Pharmaceutical forms	Inhalation powder, hard capsule
Routes of administration	Inhalation use

Dosage and administration details:

Montelukast 1 mg via dry powder inhaler by inhalation once daily at bedtime

Investigational medicinal product name	mometasone
Investigational medicinal product code	
Other name	ASMANEX™ TWISTHALER™
Pharmaceutical forms	Inhalation powder
Routes of administration	Inhalation use

Dosage and administration details:

Mometasone 220 mcg via dry powder inhaler by inhalation once daily at bedtime

Arm title	Placebo+Mometasone then Montelukast+Mometasone

Arm description:

Participants received placebo plus open-label mometasone 220 mcg by inhalation once daily for 2 weeks in Treatment Period 1 and received montelukast 1 mg plus open-label mometasone 220 mcg by inhalation once daily for 2 weeks in Treatment Period 2. Treatment Periods 1 and 2 were separated by a 1-week wash-out period during which all participants received open-label mometasone plus blinded placebo by inhalation.

Arm type	Placebo

Investigational medicinal product name	mometasone
Investigational medicinal product code	
Other name	ASMANEX™ TWISTHALER™
Pharmaceutical forms	Inhalation powder
Routes of administration	Inhalation use

Dosage and administration details:

Mometasone 220 mcg via dry powder inhaler by inhalation once daily at bedtime

Investigational medicinal product name	placebo
Investigational medicinal product code	
Other name	
Pharmaceutical forms	Inhalation powder, hard capsule
Routes of administration	Inhalation use

Dosage and administration details:

Placebo via dry powder inhaler by inhalation once daily at bedtime

Number of subjects in period 1	Montelukast+Mometasone then Placebo+Mometasone	Placebo+Mometasone then Montelukast+Mometasone
Started	66	68
Treated	65	67
Completed	62	65
Not completed	4	3
Consent withdrawn by subject	1	-
Lost to follow-up	1	1
Protocol deviation	1	1
Not treated	1	1

Period 2

Period 2 title	Treatment Period 2
Is this the baseline period?	No
Allocation method	Randomised - controlled
Blinding used	Double blind
Roles blinded	Subject, Investigator, Monitor, Data analyst, Assessor

Arms

Are arms mutually exclusive?	Yes
Arm title	Montelukast+Mometasone then Placebo+Mometasone

Arm description:

Participants received montelukast 1 mg plus open-label mometasone 220 mcg by inhalation once daily for 2 weeks in Treatment Period 1 and received placebo plus open-label mometasone 220 mcg by inhalation once daily for 2 weeks in Treatment Period 2. Treatment Periods 1 and 2 were separated by a 1-week wash-out period during which all participants received open-label mometasone plus blinded placebo by inhalation.

Arm type	Placebo

Investigational medicinal product name	mometasone
Investigational medicinal product code	
Other name	ASMANEX™ TWISTHALER™
Pharmaceutical forms	Inhalation powder
Routes of administration	Inhalation use

Dosage and administration details:

Mometasone 220 mcg via dry powder inhaler by inhalation once daily at bedtime

Investigational medicinal product name	placebo
Investigational medicinal product code	
Other name	
Pharmaceutical forms	Inhalation powder, hard capsule
Routes of administration	Inhalation use

Dosage and administration details:

Placebo via dry powder inhaler by inhalation once daily at bedtime

Arm title	Placebo+Mometasone then Montelukast+Mometasone

Arm description:

Participants received placebo plus open-label mometasone 220 mcg by inhalation once daily for 2 weeks in Treatment Period 1 and received montelukast 1 mg plus open-label mometasone 220 mcg by inhalation once daily for 2 weeks in Treatment Period 2. Treatment Periods 1 and 2 were separated by a 1-week wash-out period during which all participants received open-label mometasone plus blinded placebo by inhalation.

Arm type	Experimental
Investigational medicinal product name	montelukast
Investigational medicinal product code	
Other name	MK-0476
Pharmaceutical forms	Inhalation powder, hard capsule
Routes of administration	Inhalation use

Dosage and administration details:

Montelukast 1 mg via dry powder inhaler by inhalation once daily at bedtime

Investigational medicinal product name	mometasone
Investigational medicinal product code	
Other name	ASMANEX™ TWISTHALER™
Pharmaceutical forms	Inhalation powder
Routes of administration	Inhalation use

Dosage and administration details:

Mometasone 220 mcg via dry powder inhaler by inhalation once daily at bedtime

Number of subjects in period 2	Montelukast+Mometasone then Placebo+Mometasone	Placebo+Mometasone then Montelukast+Mometasone
Started	62	65
Completed	61	64
Not completed	1	1
Adverse event, serious fatal	-	1
Adverse event, non-fatal	1	-

Baseline characteristics

Reporting groups	
Reporting group title	Montelukast+Mometasone then Placebo+Mometasone
Reporting group description:	
Participants received montelukast 1 mg plus open-label mometasone 220 mcg by inhalation once daily for 2 weeks in Treatment Period 1 and received placebo plus open-label mometasone 220 mcg by inhalation once daily for 2 weeks in Treatment Period 2. Treatment Periods 1 and 2 were separated by a 1-week wash-out period during which all participants received open-label mometasone plus blinded placebo by inhalation.	
Reporting group title	Placebo+Mometasone then Montelukast+Mometasone
Reporting group description:	
Participants received placebo plus open-label mometasone 220 mcg by inhalation once daily for 2 weeks in Treatment Period 1 and received montelukast 1 mg plus open-label mometasone 220 mcg by inhalation once daily for 2 weeks in Treatment Period 2. Treatment Periods 1 and 2 were separated by a 1-week wash-out period during which all participants received open-label mometasone plus blinded placebo by inhalation.	

Reporting group values	Montelukast+Mometasone then Placebo+Mometasone	Placebo+Mometasone then Montelukast+Mometasone	Total
Number of subjects	66	68	134
Age categorical Units: Subjects			
Adolescents (12-17 years)	6	4	10
Adults (18-64 years)	57	58	115
From 65-84 years	3	6	9
Gender categorical Units: Subjects			
Female	37	32	69
Male	29	36	65
FEV1			
FEV1 is the amount of air (in liters) forcibly exhaled during the first second of exhalation. Baseline FEV1 was defined as the last pre ß-agonist value obtained prior to randomization.			
Units: liters arithmetic mean standard deviation	±	±	-
Daytime Asthma Symptoms Score			
In the evening just before going to bed, participants scored their asthma symptoms over the period since arising by answering the following 4 questions in a daily diary: 1) How often did you experience asthma symptoms today?; 2) How much did your asthma symptoms bother you?; 3) How much activity could you do today?; and 4) How often did your asthma affect your activities today? Daytime asthma symptoms were assessed on a 7-point scale (0=best to 6=worst).			
Units: Score on a Scale arithmetic mean standard deviation	±	±	-
Nighttime Asthma Symptoms Score			
In the morning, upon arising, and before taking any medications, participants answered the following question in a daily diary concerning the overnight period: Did you wake up with asthma symptoms? Nighttime asthma symptoms were assessed on a 4-point scale (0=No to 3=Awake all night).			
Units: Score on a Scale arithmetic mean standard deviation	±	±	-

Subject analysis sets	
Subject analysis set title	Montelukast+Mometasone Full Analysis Set
Subject analysis set type	Full analysis
Subject analysis set description:	
Participants who received ≥1 dose montelukast plus mometasone and had Baseline and post-treatment data.	
Subject analysis set title	Placebo+Mometasone Full Analysis Set
Subject analysis set type	Full analysis
Subject analysis set description:	
Participants who received ≥1 dose placebo plus mometasone and had Baseline and post-treatment data.	
Subject analysis set title	Montelukast+Mometasone Safety Set
Subject analysis set type	Safety analysis
Subject analysis set description:	
Participants who received ≥1 dose of montelukast plus mometasone	
Subject analysis set title	Placebo+Mometasone Safety Set
Subject analysis set type	Safety analysis
Subject analysis set description:	
Participants who received ≥1 dose of placebo plus mometasone	

Reporting group values	Montelukast+Mometasone Full Analysis Set	Placebo+Mometasone Full Analysis Set	Montelukast+Mometasone Safety Set
Number of subjects	127	127	130
Age categorical Units: Subjects			
Adolescents (12-17 years) Adults (18-64 years) From 65-84 years			
Gender categorical Units: Subjects			
Female Male			
FEV1			
FEV1 is the amount of air (in liters) forcibly exhaled during the first second of exhalation. Baseline FEV1 was defined as the last pre ß-agonist value obtained prior to randomization.			
Units: liters arithmetic mean standard deviation	 2.18 ± 0.6	 2.19 ± 0.61	 ±
Daytime Asthma Symptoms Score			
In the evening just before going to bed, participants scored their asthma symptoms over the period since arising by answering the following 4 questions in a daily diary: 1) How often did you experience asthma symptoms today?; 2) How much did your asthma symptoms bother you?; 3) How much activity could you do today?; and 4) How often did your asthma affect your activities today? Daytime asthma symptoms were assessed on a 7-point scale (0=best to 6=worst).			
Units: Score on a Scale arithmetic mean standard deviation	 2.1 ± 0.85	 2.12 ± 0.85	 ±
Nighttime Asthma Symptoms Score			
In the morning, upon arising, and before taking any medications, participants answered the following question in a daily diary concerning the overnight period: Did you wake up with asthma symptoms? Nighttime asthma symptoms were assessed on a 4-point scale (0=No to 3=Awake all night).			
Units: Score on a Scale arithmetic mean	 0.7	 0.71	

standard deviation	± 0.46	± 0.46	±

Reporting group values	Placebo+Mometasone Safety Set		
Number of subjects	129		
Age categorical Units: Subjects			
Adolescents (12-17 years) Adults (18-64 years) From 65-84 years			
Gender categorical Units: Subjects			
Female Male			
FEV1			
FEV1 is the amount of air (in liters) forcibly exhaled during the first second of exhalation. Baseline FEV1 was defined as the last pre ß-agonist value obtained prior to randomization.			
Units: liters arithmetic mean standard deviation	±		
Daytime Asthma Symptoms Score			
In the evening just before going to bed, participants scored their asthma symptoms over the period since arising by answering the following 4 questions in a daily diary: 1) How often did you experience asthma symptoms today?; 2) How much did your asthma symptoms bother you?; 3) How much activity could you do today?; and 4) How often did your asthma affect your activities today? Daytime asthma symptoms were assessed on a 7-point scale (0=best to 6=worst).			
Units: Score on a Scale arithmetic mean standard deviation	±		
Nighttime Asthma Symptoms Score			
In the morning, upon arising, and before taking any medications, participants answered the following question in a daily diary concerning the overnight period: Did you wake up with asthma symptoms? Nighttime asthma symptoms were assessed on a 4-point scale (0=No to 3=Awake all night).			
Units: Score on a Scale arithmetic mean standard deviation	±		

End points

End points reporting groups

Reporting group title	Montelukast+Mometasone then Placebo+Mometasone

Reporting group description:

Participants received montelukast 1 mg plus open-label mometasone 220 mcg by inhalation once daily for 2 weeks in Treatment Period 1 and received placebo plus open-label mometasone 220 mcg by inhalation once daily for 2 weeks in Treatment Period 2. Treatment Periods 1 and 2 were separated by a 1-week wash-out period during which all participants received open-label mometasone plus blinded placebo by inhalation.

Reporting group title	Placebo+Mometasone then Montelukast+Mometasone

Reporting group description:

Participants received placebo plus open-label mometasone 220 mcg by inhalation once daily for 2 weeks in Treatment Period 1 and received montelukast 1 mg plus open-label mometasone 220 mcg by inhalation once daily for 2 weeks in Treatment Period 2. Treatment Periods 1 and 2 were separated by a 1-week wash-out period during which all participants received open-label mometasone plus blinded placebo by inhalation.

Reporting group title	Montelukast+Mometasone then Placebo+Mometasone

Reporting group description:

Participants received montelukast 1 mg plus open-label mometasone 220 mcg by inhalation once daily for 2 weeks in Treatment Period 1 and received placebo plus open-label mometasone 220 mcg by inhalation once daily for 2 weeks in Treatment Period 2. Treatment Periods 1 and 2 were separated by a 1-week wash-out period during which all participants received open-label mometasone plus blinded placebo by inhalation.

Reporting group title	Placebo+Mometasone then Montelukast+Mometasone

Reporting group description:

Participants received placebo plus open-label mometasone 220 mcg by inhalation once daily for 2 weeks in Treatment Period 1 and received montelukast 1 mg plus open-label mometasone 220 mcg by inhalation once daily for 2 weeks in Treatment Period 2. Treatment Periods 1 and 2 were separated by a 1-week wash-out period during which all participants received open-label mometasone plus blinded placebo by inhalation.

Subject analysis set title	Montelukast+Mometasone Full Analysis Set
Subject analysis set type	Full analysis

Subject analysis set description:

Participants who received ≥1 dose montelukast plus mometasone and had Baseline and post-treatment data.

Subject analysis set title	Placebo+Mometasone Full Analysis Set
Subject analysis set type	Full analysis

Subject analysis set description:

Participants who received ≥1 dose placebo plus mometasone and had Baseline and post-treatment data.

Subject analysis set title	Montelukast+Mometasone Safety Set
Subject analysis set type	Safety analysis

Subject analysis set description:

Participants who received ≥1 dose of montelukast plus mometasone

Subject analysis set title	Placebo+Mometasone Safety Set
Subject analysis set type	Safety analysis

Subject analysis set description:

Participants who received ≥1 dose of placebo plus mometasone

Primary: Average Change from Baseline in FEV1 Over 2 Weeks

End point title	Average Change from Baseline in FEV1 Over 2 Weeks

End point description:

FEV1 is the amount of air (in liters) forcibly exhaled during the first second of exhalation. FEV1 was assessed 1 and 2 weeks after start of treatment. Changes from Baseline in FEV1 at Weeks 1 and 2 of treatment were averaged.

End point type	Primary

End point timeframe:

Over 2-week treatment period

End point values	Montelukast+Mometasone Full Analysis Set	Placebo+Mometasone Full Analysis Set		
Subject group type	Subject analysis set	Subject analysis set		
Number of subjects analysed	127[1]	127[2]		
Units: liters				
least squares mean (confidence interval 95%)	0.22 (0.15 to 0.3)	0.17 (0.11 to 0.23)		

Notes:

[1] - Participants who received ≥1 dose montelukast+mometasone and had Baseline and post-treatment data.

[2] - Participants who received ≥1 dose placebo+mometasone and had Baseline and post-treatment data.

Statistical analyses

Statistical analysis title	Difference in FEV1 After Treatment

Statistical analysis description:

The difference in least squares (LS) means of Montelukast+Mometasone compared to Placebo+Mometasone for FEV1 was analyzed using a longitudinal data analysis (LDA) model that included terms for treatment, time (Weeks 1 and 2), treatment-by-time interaction, period and Baseline FEV1 as a covariate.

Comparison groups	Placebo+Mometasone Full Analysis Set v Montelukast+Mometasone Full Analysis Set
Number of subjects included in analysis	254
Analysis specification	Pre-specified
Analysis type	superiority[3]
P-value	= 0.033
Method	LDA
Parameter estimate	Difference in LS Means
Point estimate	0.05
Confidence interval	
level	95 %
sides	2-sided
lower limit	0
upper limit	0.09

Notes:

[3] - Based on repeated measures analysis model using repeated measurements at 2 study times (Weeks 1 and 2) with fixed effects for treatment, time, treatment-by-time interaction, period and Baseline FEV1.

Secondary: Change from Baseline in Daytime Asthma Symptom Score

End point title	Change from Baseline in Daytime Asthma Symptom Score

End point description:

In the evening just before going to bed, participants scored their asthma symptoms over the period since arising by answering the following 4 questions in a daily diary: 1) How often did you experience asthma symptoms today?; 2) How much did your asthma symptoms bother you?; 3) How much activity could you do today?; and 4) How often did your asthma affect your activities today? Daytime asthma symptoms were assessed on a 7-point scale (0=best to 6=worst) after 1 and 2 weeks of treatment. Changes from baseline in daytime asthma symptom score by day are averaged over the diary days belonging to a specific time period (so Week 1 or 2) and the average over these 2 periods was then obtained in the model. The average change from Baseline in daytime asthma symptom score was

calculated.

End point type	Secondary

End point timeframe:

Baseline and 2 Weeks

End point values	Montelukast+Mometasone Full Analysis Set	Placebo+Mometasone Full Analysis Set		
Subject group type	Subject analysis set	Subject analysis set		
Number of subjects analysed	128[4]	129[5]		
Units: Score on a Scale				
least squares mean (confidence interval 95%)	-0.39 (-0.49 to -0.29)	-0.24 (-0.35 to -0.12)		

Notes:

[4] - Participants who received ≥1 dose montelukast+mometasone and had Baseline and post-treatment data.
[5] - Participants who received ≥1 dose placebo+mometasone and had Baseline and post-treatment data.

Statistical analyses

Statistical analysis title	Difference in Daytime Asthma Symptom Scores

Statistical analysis description:

The difference in LS means of Montelukast+Mometasone compared to Placebo+Mometasone for daytime asthma symptom score was analyzed using an LDA model that included terms for treatment, time (Weeks 1 and 2), treatment-by-time interaction, period and Baseline daytime asthma symptom score as a covariate.

Comparison groups	Montelukast+Mometasone Full Analysis Set v Placebo+Mometasone Full Analysis Set
Number of subjects included in analysis	257
Analysis specification	Pre-specified
Analysis type	superiority[6]
P-value	= 0.005
Method	LDA
Parameter estimate	Difference in LS Means
Point estimate	-0.15
Confidence interval	
level	95 %
sides	2-sided
lower limit	-0.26
upper limit	-0.05

Notes:

[6] - Based on repeated measures analysis model using repeated measurements at two study times (Weeks 1 and 2) with fixed effects for treatment, time, treatment-by-time interaction, period and Baseline daytime asthma symptom score.

Secondary: Change from Baseline in Nighttime Asthma Symptom Score

End point title	Change from Baseline in Nighttime Asthma Symptom Score

End point description:

In the morning, upon arising, and before taking any medications, participants answered the following question in a daily diary concerning the overnight period: Did you wake up with asthma symptoms? Nighttime asthma symptoms were assessed on a 4-point scale (0=No to 3=Awake all night) at Baseline and after 1 and 2 weeks of treatment. Changes from baseline in nighttime asthma symptom score by day are averaged over the diary days belonging to a specific time period (so Week 1 or 2) and the

average over these 2 periods was then obtained in the model. The average change from Baseline in nighttime asthma symptom score was calculated.

End point type	Secondary

End point timeframe:

Baseline and 2 Weeks

End point values	Montelukast+Mometasone Full Analysis Set	Placebo+Mometasone Full Analysis Set		
Subject group type	Subject analysis set	Subject analysis set		
Number of subjects analysed	89[7]	90[8]		
Units: Score on a Scale				
least squares mean (confidence interval 95%)	-0.28 (-0.35 to -0.2)	-0.18 (-0.28 to -0.09)		

Notes:

[7] - Participants who received ≥1 dose montelukast+mometasone and had Baseline and post-treatment data.
[8] - Participants who received ≥1 dose placebo+mometasone and had Baseline and post-treatment data.

Statistical analyses

Statistical analysis title	Difference in Nighttime Asthma Symptom Scores

Statistical analysis description:

The difference in LS means of Montelukast+Mometasone compared to Placebo+Mometasone for nighttime asthma symptom score was analyzed using an LDA model that included terms for treatment, time (Weeks 1 and 2), treatment-by-time interaction, period and Baseline nighttime asthma symptom score as a covariate.

Comparison groups	Montelukast+Mometasone Full Analysis Set v Placebo+Mometasone Full Analysis Set
Number of subjects included in analysis	179
Analysis specification	Pre-specified
Analysis type	superiority[9]
P-value	= 0.015
Method	LDA
Parameter estimate	Difference in LS Means
Point estimate	-0.09
Confidence interval	
level	95 %
sides	2-sided
lower limit	-0.17
upper limit	-0.02

Notes:

[9] - Based on repeated measures analysis model using repeated measurements at two study times (Weeks 1 and 2) with fixed effects for treatment, time, treatment-by-time interaction, period and Baseline nighttime asthma symptom score.

Adverse events

Adverse events information[1]

Timeframe for reporting adverse events:

Up to 1 week after last dose of study drug in a treatment period (Up to 3 weeks in a treatment period; up to 6 weeks total for the study)

Adverse event reporting additional description:

Includes all participants who received ≥1 dose of study drug in ≥1 of the 2 study periods. Participants are included in the treatment group corresponding to the study drug they actually received. Adverse events occurring during the washout period between the two treatment periods are counted towards the earlier treatment period.

Assessment type	Systematic

Dictionary used

Dictionary name	MedDRA
Dictionary version	11.1

Reporting groups

Reporting group title	Montelukast+Mometasone

Reporting group description:

Participants who received ≥1 dose of montelukast plus mometasone.

Reporting group title	Placebo+Mometasone

Reporting group description:

Participants who received ≥1 dose of placebo plus mometasone.

Notes:

[1] - There are no non-serious adverse events recorded for these results. It is expected that there will be at least one non-serious adverse event reported.
Justification: No non-serious adverse events occurred in >5% of participants in either treatment group.

Serious adverse events	Montelukast+Mometasone	Placebo+Mometasone	
Total subjects affected by serious adverse events			
subjects affected / exposed	1 / 130 (0.77%)	1 / 129 (0.78%)	
number of deaths (all causes)	1	0	
number of deaths resulting from adverse events	0	0	
Respiratory, thoracic and mediastinal disorders			
Acute respiratory failure			
subjects affected / exposed	1 / 130 (0.77%)	0 / 129 (0.00%)	
occurrences causally related to treatment / all	0 / 1	0 / 0	
deaths causally related to treatment / all	0 / 1	0 / 0	
Asthma			
subjects affected / exposed	0 / 130 (0.00%)	1 / 129 (0.78%)	
occurrences causally related to treatment / all	0 / 0	0 / 1	
deaths causally related to treatment / all	0 / 0	0 / 0	
Infections and infestations			
Pneumonia			

subjects affected / exposed	1 / 130 (0.77%)	0 / 129 (0.00%)	
occurrences causally related to treatment / all	0 / 1	0 / 0	
deaths causally related to treatment / all	0 / 1	0 / 0	

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

Non-serious adverse events	Montelukast+Mometasone	Placebo+Mometasone	
Total subjects affected by non-serious adverse events			
subjects affected / exposed	0 / 130 (0.00%)	0 / 129 (0.00%)	

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