



Clinical trial results:

Placebo-Controlled Study of Mometasone Furoate Nasal Spray (MFNS) 200 mcg QD in the Treatment of Seasonal Allergic Rhinitis

Summary

| | |
|--------------------------|----------------|
| EudraCT number | 2014-004916-12 |
| Trial protocol | Outside EU/EEA |
| Global end of trial date | 20 July 2007 |

Results information

| | |
|--------------------------------|------------------|
| Result version number | v1 (current) |
| This version publication date | 10 February 2016 |
| First version publication date | 15 July 2015 |

Trial information

Trial identification

| | |
|-----------------------|--------|
| Sponsor protocol code | P05106 |
|-----------------------|--------|

Additional study identifiers

| | |
|------------------------------------|---|
| ISRCTN number | - |
| ClinicalTrials.gov id (NCT number) | NCT00468312 |
| WHO universal trial number (UTN) | - |
| Other trial identifiers | Merck Protocol Number: MK-0887-135, Merck Protocol Number: P05106 |

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 | 20 July 2007 |
| Is this the analysis of the primary completion data? | Yes |
| Primary completion date | 20 July 2007 |
| Global end of trial reached? | Yes |
| Global end of trial date | 20 July 2007 |
| Was the trial ended prematurely? | No |

Notes:

General information about the trial

Main objective of the trial:

This study is designed to assess the efficacy of mometasone furoate nasal spray (MFNS) once daily compared with placebo in participants with seasonal allergic rhinitis (SAR) in reducing the total nasal symptom score (TNSS) and the total ocular symptom score (TOSS).

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.

Background therapy: -

Evidence for comparator: -

| | |
|---|---------------|
| Actual start date of recruitment | 22 March 2007 |
| 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 States: 429 |
| Worldwide total number of subjects | 429 |
| 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) | 1 |
| Adolescents (12-17 years) | 55 |
| Adults (18-64 years) | 365 |
| From 65 to 84 years | 8 |
| 85 years and over | 0 |

Subject disposition

Recruitment

Recruitment details: -

Pre-assignment

Screening details:

Participants 12 years of age and older with at least a 2-year documented history of SAR which exacerbated during the study season of SAR were selected for this study.

Period 1

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

Arms

| | |
|------------------------------|---------------------------------------|
| Are arms mutually exclusive? | Yes |
| Arm title | Mometasone Furoate Nasal Spray (MFNS) |

Arm description:

MFNS 200 mcg (two sprays in each nostril) once daily in the morning. Each spray is equal to 50 mcg.

| | |
|--|------------------------------|
| Arm type | Experimental |
| Investigational medicinal product name | mometasone furoate |
| Investigational medicinal product code | |
| Other name | Nasonex, MK-0887, SCH 032088 |
| Pharmaceutical forms | Nasal spray |
| Routes of administration | Intranasal use |

Dosage and administration details:

Two sprays in each nostril once daily in the morning

| | |
|------------------|---------|
| Arm title | Placebo |
|------------------|---------|

Arm description:

Two sprays in each nostril once daily in the morning

| | |
|--|----------------|
| Arm type | Placebo |
| Investigational medicinal product name | Placebo |
| Investigational medicinal product code | |
| Other name | |
| Pharmaceutical forms | Nasal spray |
| Routes of administration | Intranasal use |

Dosage and administration details:

Two sprays in each nostril once daily in the morning

| Number of subjects in period 1 | Mometasone Furoate Nasal Spray (MFNS) | Placebo |
|---------------------------------------|---------------------------------------|---------|
| Started | 220 | 209 |
| Completed | 216 | 204 |
| Not completed | 4 | 5 |
| Did not meet protocol eligibility | - | 1 |

| | | |
|--------------------------|---|---|
| Adverse event, non-fatal | 2 | 1 |
| Protocol deviation | 2 | 1 |
| Lack of efficacy | - | 1 |
| Withdrawal by subject | - | 1 |

Baseline characteristics

Reporting groups

| | |
|---|---------------------------------------|
| Reporting group title | Mometasone Furoate Nasal Spray (MFNS) |
| Reporting group description: MFNS 200 mcg (two sprays in each nostril) once daily in the morning. Each spray is equal to 50 mcg. | |
| Reporting group title | Placebo |
| Reporting group description: Two sprays in each nostril once daily in the morning | |

| Reporting group values | Mometasone Furoate Nasal Spray (MFNS) | Placebo | Total |
|---------------------------------------|---------------------------------------|---------|-------|
| Number of subjects | 220 | 209 | 429 |
| Age categorical Units: Subjects | | | |
| 6 to <12 years | 0 | 1 | 1 |
| 12 to <18 years | 31 | 24 | 55 |
| 18 to <65 years | 184 | 181 | 365 |
| ≥65 years | 5 | 3 | 8 |
| Gender categorical Units: Subjects | | | |
| Female | 132 | 125 | 257 |
| Male | 88 | 84 | 172 |

End points

End points reporting groups

| | |
|---|---------------------------------------|
| Reporting group title | Mometasone Furoate Nasal Spray (MFNS) |
| Reporting group description: MFNS 200 mcg (two sprays in each nostril) once daily in the morning. Each spray is equal to 50 mcg. | |
| Reporting group title | Placebo |
| Reporting group description: Two sprays in each nostril once daily in the morning | |

Primary: Change from Baseline in average AM instantaneous (NOW) Total Nasal Symptom Score (TNSS) averaged over Days 2 to 15

| | |
|--|--|
| End point title | Change from Baseline in average AM instantaneous (NOW) Total Nasal Symptom Score (TNSS) averaged over Days 2 to 15 |
| End point description: TNSS was defined as the sum of the following four nasal symptoms: rhinorrhea, nasal congestion/stuffiness, nasal itching, and sneezing; each symptom scored on a scale of 0 = none, 1 = mild, 2 = moderate, and 3 = severe. The best possible score on this scale is 0 and the worst possible score on this scale is 12. | |
| End point type | Primary |
| End point timeframe: Baseline and Days 2 through 15 | |

| End point values | Mometasone Furoate Nasal Spray (MFNS) | Placebo | | |
|---|---------------------------------------|--------------------|--|--|
| Subject group type | Reporting group | Reporting group | | |
| Number of subjects analysed | 220 ^[1] | 208 ^[2] | | |
| Units: Score on a scale | | | | |
| least squares mean (standard deviation) | | | | |
| Baseline TNSS | 9.31 (± 1.6) | 9.31 (± 1.6) | | |
| Change from Baseline in TNSS | -2.54 (± 1.99) | -1.66 (± 1.99) | | |

Notes:

[1] - All randomized participants who took ≥1 study drug dose and were evaluable for this end point.

[2] - All randomized participants who took ≥1 study drug dose and were evaluable for this end point.

Statistical analyses

| | |
|---|---|
| Statistical analysis title | Change in AM NOW TNSS: MFNS vs. Placebo |
| Statistical analysis description: Difference in Least Square (LS) means for average change from Baseline over Days 2 to 15 in AM NOW TNSS: MFNS 200 mcg vs. Placebo. LS means, pooled standard deviation, and 95% Confidence Intervals are obtained from an analysis of covariance (ANCOVA) model with treatment and site effect with baseline score as a covariate. | |
| Comparison groups | Placebo v Mometasone Furoate Nasal Spray (MFNS) |

| | |
|---|---------------|
| Number of subjects included in analysis | 428 |
| Analysis specification | Pre-specified |
| Analysis type | superiority |
| P-value | < 0.001 |
| Method | ANCOVA |
| Confidence interval | |
| level | 95 % |
| sides | 2-sided |
| lower limit | -1.27 |
| upper limit | -0.51 |

Primary: Change from Baseline in average AM instantaneous (NOW) Total Ocular Symptom Score (TOSS) averaged over Days 2 to 15

| | |
|------------------------|--|
| End point title | Change from Baseline in average AM instantaneous (NOW) Total Ocular Symptom Score (TOSS) averaged over Days 2 to 15 |
| End point description: | TOSS was defined as the sum of the following three ocular symptoms: redness of eyes, itching/burning eyes, and tearing/watering eyes; each symptom scored on a scale of 0 = none, 1 = mild, 2 = moderate, and 3 = severe. The best possible score on this scale is 0 and the worst possible score on the scale is 9. |
| End point type | Primary |
| End point timeframe: | Baseline and Days 2 through 15 |

| End point values | Mometasone Furoate Nasal Spray (MFNS) | Placebo | | |
|---|---------------------------------------|--------------------|--|--|
| Subject group type | Reporting group | Reporting group | | |
| Number of subjects analysed | 220 ^[3] | 208 ^[4] | | |
| Units: Score on a scale | | | | |
| least squares mean (standard deviation) | | | | |
| Baseline TOSS | 6.78 (± 1.46) | 6.74 (± 1.46) | | |
| Change from Baseline in TOSS | -1.71 (± 1.6) | -1.37 (± 1.6) | | |

Notes:

[3] - All randomized participants who took ≥1 study drug dose and were evaluable for this end point.

[4] - All randomized participants who took ≥1 study drug dose and were evaluable for this end point.

Statistical analyses

| | |
|-----------------------------------|---|
| Statistical analysis title | Change in AM NOW TOSS: MFNS vs. Placebo |
| Statistical analysis description: | Difference in Least Square (LS) means for average change from Baseline over Days 2 to 15 in AM NOW TOSS: MFNS 200 mcg vs. Placebo. LS means, pooled standard deviation, and 95% Confident Intervals are obtained from an analysis of covariance (ANCOVA) model with treatment and site effect with baseline score as a covariate. |
| Comparison groups | Mometasone Furoate Nasal Spray (MFNS) v Placebo |

| | |
|---|---------------|
| Number of subjects included in analysis | 428 |
| Analysis specification | Pre-specified |
| Analysis type | superiority |
| P-value | = 0.026 |
| Method | ANCOVA |
| Confidence interval | |
| level | 95 % |
| sides | 2-sided |
| lower limit | -0.65 |
| upper limit | -0.04 |

Secondary: Change from Baseline in AM NOW nasal congestion score averaged over Days 2 to 15

| | |
|--|--|
| End point title | Change from Baseline in AM NOW nasal congestion score averaged over Days 2 to 15 |
| End point description: | |
| Nasal congestion was one of the symptoms measured in the TNSS and was scored on a scale of 0 = none, 1 = mild, 2 = moderate, and 3 = severe. The best possible score on this scale is 0 and the worst possible score on this scale is 3. | |
| End point type | Secondary |
| End point timeframe: | |
| Baseline and Days 2 through 15 | |

| End point values | Mometasone Furoate Nasal Spray (MFNS) | Placebo | | |
|--|---------------------------------------|--------------------|--|--|
| Subject group type | Reporting group | Reporting group | | |
| Number of subjects analysed | 220 ^[5] | 208 ^[6] | | |
| Units: Score on a scale | | | | |
| least squares mean (standard deviation) | | | | |
| Baseline Nasal Congestion Score | 2.6 (± 0.38) | 2.62 (± 0.38) | | |
| Change from Baseline in Nasal Congestion Score | -0.59 (± 0.53) | -0.39 (± 0.53) | | |

Notes:

[5] - All randomized participants who took ≥1 study drug dose and were evaluable for this end point.

[6] - All randomized participants who took ≥1 study drug dose and were evaluable for this end point.

Statistical analyses

| | |
|--|---|
| Statistical analysis title | Change in AM NOW Nasal Congestion Score |
| Statistical analysis description: | |
| Difference in Least Square (LS) means for average change from Baseline over Days 2 to 15 in AM NOW Nasal Congestion Score: MFNS 200 mcg vs. Placebo. LS means, pooled standard deviation, and 95% Confidence Intervals are obtained from an analysis of covariance (ANCOVA) model with treatment and site effect with baseline score as a covariate. | |
| Comparison groups | Mometasone Furoate Nasal Spray (MFNS) v Placebo |

| | |
|---|---------------|
| Number of subjects included in analysis | 428 |
| Analysis specification | Pre-specified |
| Analysis type | superiority |
| P-value | < 0.001 |
| Method | ANCOVA |
| Confidence interval | |
| level | 95 % |
| sides | 2-sided |
| lower limit | -0.31 |
| upper limit | -0.1 |

Secondary: Change from Baseline in Rhinoconjunctivitis Quality of Life Questionnaire (RQLQ) Total Score at Endpoint (Last Post Baseline Evaluation Carried Forward)

| | |
|-----------------|--|
| End point title | Change from Baseline in Rhinoconjunctivitis Quality of Life Questionnaire (RQLQ) Total Score at Endpoint (Last Post Baseline Evaluation Carried Forward) |
|-----------------|--|

End point description:

The RQLQ consisted of 28 items that fell into the following seven domains: activities, sleep, non-nose/eye symptoms, practical problems, nasal symptoms, eye symptoms, and emotional. Each of the items was scored from 0 = not troubled to 6 = extremely troubled, and the total of the seven domains was the primary focus of this quality of life evaluation. The best possible score on this scale is 0 and the worst possible score on this scale is 42. The Endpoint was the last post baseline evaluation carried forward and was Day 15 for the majority of the participants. The analysis population included subjects who were randomized to treatment, answered the RQL questionnaire both at baseline and post baseline visits and were at least 18 years of age.

| | |
|----------------|-----------|
| End point type | Secondary |
|----------------|-----------|

End point timeframe:

Baseline and Day 15

| End point values | Mometasone Furoate Nasal Spray (MFNS) | Placebo | | |
|--|---------------------------------------|--------------------|--|--|
| Subject group type | Reporting group | Reporting group | | |
| Number of subjects analysed | 189 ^[7] | 182 ^[8] | | |
| Units: Score on a scale | | | | |
| least squares mean (standard deviation) | | | | |
| Baseline RQLQ Total Score | 4.27 (± 1.01) | 4.28 (± 1.01) | | |
| Change from Baseline in RQLQ Total Score | -1.81 (± 1.36) | -1.08 (± 1.36) | | |

Notes:

[7] - The RQLQ tool is only validated in participants greater than 18 years of age.

[8] - The RQLQ tool is only validated in participants greater than 18 years of age.

Statistical analyses

| | |
|----------------------------|----------------------------------|
| Statistical analysis title | Change in RQLQ: MFNS vs. Placebo |
|----------------------------|----------------------------------|

Statistical analysis description:

Change in Least Square (LS) means for average change from Baseline over Days 2 to 15 in RQLQ total score: MFNS 200 mcg vs. Placebo. LS means, pooled standard deviation, and 95% Confidence Intervals are obtained from an analysis of covariance (ANCOVA) model with treatment and site effects with

baseline score as a covariate.

| | |
|---|---|
| Comparison groups | Mometasone Furoate Nasal Spray (MFNS) v Placebo |
| Number of subjects included in analysis | 371 |
| Analysis specification | Pre-specified |
| Analysis type | superiority |
| P-value | < 0.001 |
| Method | ANCOVA |
| Confidence interval | |
| level | 95 % |
| sides | 2-sided |
| lower limit | -1.01 |
| upper limit | -0.45 |

Secondary: Change from Baseline in AM Peak Nasal Inspiratory Flow (PNIF) averaged over Days 2 to 15

| | |
|-----------------|--|
| End point title | Change from Baseline in AM Peak Nasal Inspiratory Flow (PNIF) averaged over Days 2 to 15 |
|-----------------|--|

End point description:

Participants were to measure nasal airflow twice daily (in the morning prior to study drug dosing and in the evening) using their PNIF meter. The highest of 3 assessments was to be recorded in the electronic diary. The PNIF meter limits were between 30 and 370 liters/minute. Normal values range between 100 and 150 liters/minute. A positive change from Baseline correlates with improved nasal air flow.

| | |
|----------------|-----------|
| End point type | Secondary |
|----------------|-----------|

End point timeframe:

Baseline and Days 2 through 15

| End point values | Mometasone Furoate Nasal Spray (MFNS) | Placebo | | |
|---|---------------------------------------|---------------------|--|--|
| Subject group type | Reporting group | Reporting group | | |
| Number of subjects analysed | 220 ^[9] | 208 ^[10] | | |
| Units: liters/minute | | | | |
| least squares mean (standard deviation) | | | | |
| Baseline PNIF | 93.12 (± 41.3) | 91.96 (± 41.3) | | |
| Change from Baseline in PNIF | 16.55 (± 36.9) | 12.59 (± 36.9) | | |

Notes:

[9] - All randomized participants who took ≥1 study drug dose and were evaluable for this end point.

[10] - All randomized participants who took ≥1 study drug dose and were evaluable for this end point.

Statistical analyses

| | |
|----------------------------|----------------------------------|
| Statistical analysis title | Change in PNIF: MFNS vs. Placebo |
|----------------------------|----------------------------------|

Statistical analysis description:

Difference in Least Square (LS) means for average change from Baseline from Days 2 to 15 in PNIF: MFNS 200 mcg vs. Placebo. LS means, pooled standard deviation, and 95% Confidence Intervals are obtained from an analysis of covariance (ANCOVA) model with treatment and site effect with baseline score as a covariate.

| | |
|-------------------|---|
| Comparison groups | Mometasone Furoate Nasal Spray (MFNS) v Placebo |
|-------------------|---|

| | |
|---|---------------|
| Number of subjects included in analysis | 428 |
| Analysis specification | Pre-specified |
| Analysis type | superiority |
| P-value | = 0.269 |
| Method | ANCOVA |
| Confidence interval | |
| level | 95 % |
| sides | 2-sided |
| lower limit | -3.07 |
| upper limit | 10.98 |

Adverse events

Adverse events information^[1]

Timeframe for reporting adverse events:

Up to 45 days (including up to 30 days following last dose for serious adverse events)

Adverse event reporting additional description:

The safety population consisted of all randomized participants who received ≥ 1 dose of study drug.

| | |
|-----------------|------------|
| Assessment type | Systematic |
|-----------------|------------|

Dictionary used

| | |
|-----------------|--------|
| Dictionary name | MedDRA |
|-----------------|--------|

| | |
|--------------------|------|
| Dictionary version | 10.0 |
|--------------------|------|

Reporting groups

| | |
|-----------------------|---------------------------------------|
| Reporting group title | Mometasone Furoate Nasal Spray (MFNS) |
|-----------------------|---------------------------------------|

Reporting group description:

MFNS 200 mcg (two sprays in each nostril) once daily in the morning. Each spray is equal to 50 mcg.

| | |
|-----------------------|---------|
| Reporting group title | Placebo |
|-----------------------|---------|

Reporting group description:

Two sprays in each nostril once daily in the morning

| Serious adverse events | Mometasone Furoate Nasal Spray (MFNS) | Placebo | |
|---|---------------------------------------|-----------------|--|
| Total subjects affected by serious adverse events | | | |
| subjects affected / exposed | 0 / 220 (0.00%) | 0 / 209 (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: 5 %

| Non-serious adverse events | Mometasone Furoate Nasal Spray (MFNS) | Placebo | |
|---|---------------------------------------|-----------------|--|
| Total subjects affected by non-serious adverse events | | | |
| subjects affected / exposed | 0 / 220 (0.00%) | 0 / 209 (0.00%) | |

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 exceeded the 5% threshold for any reporting group.

More information

Substantial protocol amendments (globally)

Were there any global substantial amendments to the protocol? Yes

| Date | Amendment |
|---------------|--|
| 08 March 2007 | Primary reason for amendment was to incorporate revisions to primary endpoint from assessing total symptom score (TSS) to assessing total nasal symptom score (TNSS) and total ocular symptom score (TOSS). |
| 28 May 2007 | Primary reason for amendment was to add secondary objectives to assess the efficacy of MFNS in improving congestion, the Rhinoconjunctivitis Quality of Life Questionnaire (RQLQ), and AM peak nasal inspiratory flow. |

Notes:

Interruptions (globally)

Were there any global interruptions to the trial? No

Limitations and caveats

None reported