



## Clinical trial results: Safety and Efficacy Evaluation of Topical Moxidex Otic Solution Compared to Moxifloxacin Solution in the Treatment of Acute Otitis Media with Otorrhea through Tympanostomy Tubes (AOMT)

### Summary

EudraCT number	2018-000640-26
Trial protocol	Outside EU/EEA
Global end of trial date	04 February 2009

### Results information

Result version number	v1 (current)
This version publication date	23 August 2018
First version publication date	23 August 2018

### Trial information

#### Trial identification

Sponsor protocol code	C-05-36
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#### Additional study identifiers

ISRCTN number	-
ClinicalTrials.gov id (NCT number)	NCT00579189
WHO universal trial number (UTN)	-

Notes:

### Sponsors

Sponsor organisation name	Alcon Research Ltd
Sponsor organisation address	6201 S. Freeway, Fort Worth, TX, United States, 76134
Public contact	Ophthalmology Unit, Novartis Pharmaceuticals , + 44 0127666733385, linda.masson@novartis.com
Scientific contact	Ophthalmology Unit, Novartis Pharmaceuticals , + 44 0127666733385, linda.masson@novartis.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	04 February 2009
Is this the analysis of the primary completion data?	Yes
Primary completion date	04 February 2009
Global end of trial reached?	Yes
Global end of trial date	04 February 2009
Was the trial ended prematurely?	No

Notes:

## General information about the trial

Main objective of the trial:

The purpose of this study was to evaluate the efficacy and safety of topical Moxidex otic solution for the treatment of subjects with acute otitis media with tympanostomy tubes (AOMT) and to compare Moxidex otic solution with Moxifloxacin solution for cessation of otorrhea.

Protection of trial subjects:

Prior to the start of the study, the study protocol, the informed consent and assent documents, patient instruction sheets, the Investigator's Brochure, as well as any advertising materials used to recruit patients were submitted to institutional review boards (IRBs) and independent ethics committees (IECs). The IRB/IECs reviewed all documents and approved required documents; copies of the approval letters were provided to Alcon. Consistent with both the IRB/IEC's requirements and all applicable regulations, the Investigators periodically provided study updates to the IRB/IEC. A patient or parent/legal guardian (if necessary, a legally authorized representative) provided informed consent, and children signed an approved assent form when appropriate. This study was conducted in accordance with Good Clinical Practices (GCP) and the ethical principles that have their origins in the Declaration of Helsinki.

Background therapy: -

Evidence for comparator: -

Actual start date of recruitment	22 February 2006
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: 776
Worldwide total number of subjects	776
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)	377
Children (2-11 years)	395
Adolescents (12-17 years)	4

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

## Subject disposition

### Recruitment

Recruitment details:

Subjects were recruited at 48 sites located in the United States.

### Pre-assignment

Screening details:

This reporting group includes all randomized and treated subjects (776).

### Period 1

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

### Arms

Are arms mutually exclusive?	Yes
<b>Arm title</b>	Moxidex Solution

Arm description:

Moxifloxacin hydrochloride 0.5%/Dexamethasone phosphate 0.1%, 4 drops into the infected ear(s), twice daily (morning and evening), for 7 days

Arm type	Experimental
Investigational medicinal product name	Moxifloxacin 0.5%/dexamethasone phosphate 0.1% solution
Investigational medicinal product code	
Other name	Moxidex
Pharmaceutical forms	Ear drops, solution
Routes of administration	Auricular use

Dosage and administration details:

4 drops twice daily (BID) for 7 days

<b>Arm title</b>	Moxifloxacin Solution
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Arm description:

Moxifloxacin hydrochloride 0.5%, 4 drops into the infected ear(s), twice daily (morning and evening), for 7 days

Arm type	Active comparator
Investigational medicinal product name	Moxifloxacin hydrochloride 0.5% solution
Investigational medicinal product code	
Other name	Moxifloxacin
Pharmaceutical forms	Ear drops, solution
Routes of administration	Auricular use

Dosage and administration details:

4 drops BID for 7 days

<b>Number of subjects in period 1</b>	Moxidex Solution	Moxifloxacin Solution
Started	389	387
Completed	302	264
Not completed	87	123
Treatment failure	30	50
Baseline culture results positive for Strep A	7	8
Adverse event, non-fatal	35	40
Inclusion/exclusion violation	3	4
Baseline culture results positive for yeast	1	4
Decision unrelated to an AE	1	3
Lost to follow-up	3	1
Noncompliance	1	4
Other - Reason not given	6	9

## Baseline characteristics

### Reporting groups

Reporting group title	Moxidex Solution
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Reporting group description:

Moxifloxacin hydrochloride 0.5%/Dexamethasone phosphate 0.1%, 4 drops into the infected ear(s), twice daily (morning and evening), for 7 days

Reporting group title	Moxifloxacin Solution
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Reporting group description:

Moxifloxacin hydrochloride 0.5%, 4 drops into the infected ear(s), twice daily (morning and evening), for 7 days

Reporting group values	Moxidex Solution	Moxifloxacin Solution	Total
Number of subjects	389	387	776
Age categorical			
This analysis population includes all subjects who received drug. Subjects were analysed based on planned treatment group (Intent-to-Treat (ITT) Analysis Set).			
Units: Subjects			
Infants and toddlers (28 days-23 months)	201	176	377
Children (2-11 years)	184	211	395
Adolescents (12-17 years)	4	0	4
Gender categorical			
ITT Analysis Set			
Units: Subjects			
Female	166	159	325
Male	223	228	451

## End points

### End points reporting groups

Reporting group title	Moxidex Solution
Reporting group description: Moxifloxacin hydrochloride 0.5%/Dexamethasone phosphate 0.1%, 4 drops into the infected ear(s), twice daily (morning and evening), for 7 days	
Reporting group title	Moxifloxacin Solution
Reporting group description: Moxifloxacin hydrochloride 0.5%, 4 drops into the infected ear(s), twice daily (morning and evening), for 7 days	

### Primary: Time to Cessation of Otorrhea

End point title	Time to Cessation of Otorrhea
End point description: Time to cessation of otorrhea was defined as the time (in days) to the cessation of otorrhea (i.e. absence of otorrhea), calculated as the number of days from surgery to the absence of otorrhea in both ears, as recorded by the parent/guardian via the patient diary. This analysis set includes all subjects who received drug, met pre-randomization inclusion and exclusion criteria and were pathogen positive for bacteria on Day 1 (Modified ITT (MITT) Analysis Set).	
End point type	Primary
End point timeframe: Up to Day 15 (Test of Cure (TOC))	

End point values	Moxidex Solution	Moxifloxacin Solution		
Subject group type	Reporting group	Reporting group		
Number of subjects analysed	298	305		
Units: days				
median (confidence interval 95%)	3.0 (2.5 to 3.5)	5.0 (4.0 to 5.5)		

### Statistical analyses

Statistical analysis title	Time to cessation of otorrhea
Comparison groups	Moxidex Solution v Moxifloxacin Solution
Number of subjects included in analysis	603
Analysis specification	Pre-specified
Analysis type	superiority
P-value	= 0.001
Method	Logrank

### Secondary: Percentage of subjects with clinical cure at TOC

End point title	Percentage of subjects with clinical cure at TOC
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End point description:

Clinical Cure was defined as a clinical response of resolved/cured (i.e. otorrhea absent) or improved/ not changed/ worsened (i.e. otorrhea present) as evaluated by the Investigator. Reported as a percentage. MITT Analysis Set.

End point type	Secondary
End point timeframe:	
Day 15 (TOC)	

End point values	Moxidex Solution	Moxifloxacin Solution		
Subject group type	Reporting group	Reporting group		
Number of subjects analysed	298	305		
Units: percentage of subjects				
number (not applicable)				
Absent	84.6	71.5		
Present	15.4	28.5		

### Statistical analyses

Statistical analysis title	Clinical cure at TOC
Comparison groups	Moxidex Solution v Moxifloxacin Solution
Number of subjects included in analysis	603
Analysis specification	Pre-specified
Analysis type	superiority
P-value	= 0.0001
Method	Chi-squared

### Secondary: Percentage of subjects for microbiological outcome at TOC

End point title	Percentage of subjects for microbiological outcome at TOC
End point description:	
Microbiological outcome (success or failure of eradication of pre-therapy pathogens ) was measured by bacterial response at the TOC visit. MITT Analysis Set.	
End point type	Secondary
End point timeframe:	
Day 15 (TOC)	



End point values	Moxidex Solution	Moxifloxacin Solution		
Subject group type	Reporting group	Reporting group		
Number of subjects analysed	298	305		
Units: percentage of subjects				
number (not applicable)				
Success	84.6	71.5		
Failure	15.4	28.5		

### Statistical analyses

<b>Statistical analysis title</b>	Microbiological success
Comparison groups	Moxidex Solution v Moxifloxacin Solution
Number of subjects included in analysis	603
Analysis specification	Pre-specified
Analysis type	superiority
P-value	= 0.0001
Method	Chi-squared

### Secondary: Percentage of subjects with treatment failure at TOC

End point title	Percentage of subjects with treatment failure at TOC
End point description: Subjects who showed no clinically relevant response to the medication or who worsened in otorrhea after at least 2 full days of treatment with the study medication could be considered treatment failures. Reported as a percentage. MITT Analysis Set.	
End point type	Secondary
End point timeframe: Day 15 (TOC)	

End point values	Moxidex Solution	Moxifloxacin Solution		
Subject group type	Reporting group	Reporting group		
Number of subjects analysed	298	305		
Units: percentage of subjects				
number (not applicable)	6.7	14.8		

### Statistical analyses

<b>Statistical analysis title</b>	Treatment Failure
Comparison groups	Moxidex Solution v Moxifloxacin Solution

Number of subjects included in analysis	603
Analysis specification	Pre-specified
Analysis type	superiority
P-value	= 0.0015
Method	Chi-squared

## Adverse events

### Adverse events information

Timeframe for reporting adverse events:

Adverse events (AEs) are collected from First Patient First Visit (FPFV) until Last Patient Last Visit (LPLV). All AEs reported in this record are from date of First Patient First Treatment until Last Patient Last Visit.

Adverse event reporting additional description:

This analysis population includes all subjects who received drug (Safety Analysis Set). Subjects were analysed based on actual treatment group.

Assessment type	Systematic
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### Dictionary used

Dictionary name	MedDRA
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Dictionary version	20.1
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### Reporting groups

Reporting group title	Moxidex Solution
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Reporting group description:

Subjects treated with Moxidex solution

Reporting group title	Moxifloxacin Solution
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Reporting group description:

Subjects treated with Moxifloxacin solution

Serious adverse events	Moxidex Solution	Moxifloxacin Solution	
Total subjects affected by serious adverse events			
subjects affected / exposed	0 / 389 (0.00%)	1 / 387 (0.26%)	
number of deaths (all causes)	0	0	
number of deaths resulting from adverse events	0	0	
Infections and infestations			
Cellulitis			
subjects affected / exposed	0 / 389 (0.00%)	1 / 387 (0.26%)	
occurrences causally related to treatment / all	0 / 0	0 / 1	
deaths causally related to treatment / all	0 / 0	0 / 0	

Frequency threshold for reporting non-serious adverse events: 1 %

Non-serious adverse events	Moxidex Solution	Moxifloxacin Solution	
Total subjects affected by non-serious adverse events			
subjects affected / exposed	153 / 389 (39.33%)	147 / 387 (37.98%)	
Injury, poisoning and procedural complications			

Injury subjects affected / exposed occurrences (all)	4 / 389 (1.03%) 5	7 / 387 (1.81%) 7	
General disorders and administration site conditions Pyrexia subjects affected / exposed occurrences (all)	21 / 389 (5.40%) 21	17 / 387 (4.39%) 17	
Ear and labyrinth disorders Ear pain subjects affected / exposed occurrences (all)  Otorrhoea subjects affected / exposed occurrences (all)  Ear discomfort subjects affected / exposed occurrences (all)	10 / 389 (2.57%) 10  8 / 389 (2.06%) 8  5 / 389 (1.29%) 5	12 / 387 (3.10%) 12  6 / 387 (1.55%) 7  7 / 387 (1.81%) 7	
Gastrointestinal disorders Teething subjects affected / exposed occurrences (all)  Diarrhoea subjects affected / exposed occurrences (all)  Vomiting subjects affected / exposed occurrences (all)	13 / 389 (3.34%) 13  7 / 389 (1.80%) 7  9 / 389 (2.31%) 9	2 / 387 (0.52%) 2  8 / 387 (2.07%) 8  3 / 387 (0.78%) 3	
Respiratory, thoracic and mediastinal disorders Cough subjects affected / exposed occurrences (all)  Rhinorrhoea subjects affected / exposed occurrences (all)  Nasal congestion	14 / 389 (3.60%) 14  12 / 389 (3.08%) 12	13 / 387 (3.36%) 13  12 / 387 (3.10%) 12	

subjects affected / exposed occurrences (all)	5 / 389 (1.29%) 5	7 / 387 (1.81%) 7	
Rhinitis allergic subjects affected / exposed occurrences (all)	2 / 389 (0.51%) 2	4 / 387 (1.03%) 4	
Psychiatric disorders Irritability subjects affected / exposed occurrences (all)	6 / 389 (1.54%) 6	0 / 387 (0.00%) 0	
Infections and infestations Otitis media subjects affected / exposed occurrences (all)	28 / 389 (7.20%) 28	22 / 387 (5.68%) 22	
Upper respiratory tract infection subjects affected / exposed occurrences (all)	25 / 389 (6.43%) 25	10 / 387 (2.58%) 10	
Conjunctivitis subjects affected / exposed occurrences (all)	7 / 389 (1.80%) 7	2 / 387 (0.52%) 2	
Sinusitis subjects affected / exposed occurrences (all)	1 / 389 (0.26%) 1	5 / 387 (1.29%) 5	
Product issues Device occlusion subjects affected / exposed occurrences (all)	3 / 389 (0.77%) 3	8 / 387 (2.07%) 8	

## More information

### Substantial protocol amendments (globally)

Were there any global substantial amendments to the protocol? No

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### Interruptions (globally)

Were there any global interruptions to the trial? No

### Limitations and caveats

None reported