Clinical trial results:
An Exploratory Study to Assess the 24-hour Intraocular Pressure (IOP) Lowering Characteristics, Duration of Action and Safety of DE-126 ophthalmic solution 0.002% versus Latanoprost ophthalmic solution 0.005% in Subjects with Primary Open Angle Glaucoma or Ocular Hypertension

Summary

EudraCT number	2020-004836-93
Trial protocol	DE AT GR
Global end of trial date	09 January 2023

Results information

Result version number	v1 (current)
This version publication date	30 December 2023
First version publication date	30 December 2023

Trial information

Trial identification

Sponsor protocol code	012603SA

Additional study identifiers

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

Notes:

Sponsors

Sponsor organisation name	Santen S.A.S.
Sponsor organisation address	1 Rue Pierre Fontaine, Genavenir IV, Evry cedex, France, F-91058
Public contact	Responsible Physician, Santen Oy, +358 405012416, auli.ropo@santen.com
Scientific contact	Responsible Physician, Santen Oy, +358 405012416, auli.ropo@santen.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?	No

Notes:

Results analysis stage

Analysis stage	Final
Date of interim/final analysis	30 March 2023
Is this the analysis of the primary completion data?	Yes
Primary completion date	09 January 2023
Global end of trial reached?	Yes
Global end of trial date	09 January 2023
Was the trial ended prematurely?	No

Notes:

General information about the trial

Main objective of the trial:

To compare the 24h IOP lowering characteristics of DE-126 ophthalmic solution 0.002% with latanoprost ophthalmic solution 0.005%, both given once daily in the evening for 3 months+1d.

Protection of trial subjects:

The Informed Consent Form was written in compliance with US Title 21 CFR Part 50, ICH guidelines, and other national regulations as appropriate. Site-specific versions are on file with Santen, Inc. and are available upon request.

Background therapy: -

Evidence for comparator: -

Actual start date of recruitment	30 June 2021
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	Austria: 5
Country: Number of subjects enrolled	Germany: 8
Country: Number of subjects enrolled	Greece: 20
Worldwide total number of subjects	33
EEA total number of subjects	33

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)	16
From 65 to 84 years	17

85 years and over	0

Subject disposition

Recruitment

Recruitment details: -

Pre-assignment

Screening details:

A total of 47 subjects were enrolled into the study (signed informed consent) of whom 33 were randomized. 14 subjects were considered screen failure. 1 subject in the DE-126 group had a fatal outcome following complications related to COVID-19.

Period 1

Period 1 title	Single-Masked treatment Period (overall period)
Is this the baseline period?	Yes
Allocation method	Randomised - controlled
Blinding used	Single blind
Roles blinded	Investigator[1]

Arms

Are arms mutually exclusive?	Yes
Arm title	DE-126

Arm description:

0.002% DE-126
Aqueous solution containing 0.02 mg/mL DE-126, and water for injections.

Arm type	Experimental
Investigational medicinal product name	PF DE-126 ophthalmic solution 0.002%
Investigational medicinal product code	
Other name	
Pharmaceutical forms	Eye drops
Routes of administration	Ophthalmic use

Dosage and administration details:

DE-126 0.002%, dosed once daily in the evening, was identified as the optimal dose among the 4 concentrations evaluated in both US and Japanese subjects with POAG or OHT, with respect to IOP lowering and safety profile.

Arm title	Latanoprost

Arm description:

0.005% Latanoprost
Aqueous solution containing the active ingredient, latanoprost 0.05 mg/mL, water for injections.

Arm type	Active comparator
Investigational medicinal product name	Latanoprost ophthalmic solution 0.005% (Xalatan®)
Investigational medicinal product code	
Other name	
Pharmaceutical forms	Eye drops
Routes of administration	Ophthalmic use

Dosage and administration details:

For latanoprost, the study dosing regimen was consistent with the current Xalatan labeling recommendation.

Notes:

[1] - The roles blinded appear inconsistent with a simple blinded trial.

Justification: The study was a single-masked study with investigators involved in the conduct of the study masked from the study treatment.

Number of subjects in period 1	DE-126	Latanoprost
Started	17	16
Completed	16	16
Not completed	1	0
Adverse event, serious fatal	1	-

Baseline characteristics

Reporting groups	
Reporting group title	DE-126
Reporting group description:	
0.002% DE-126 Aqueous solution containing 0.02 mg/mL DE-126, and water for injections.	
Reporting group title	Latanoprost
Reporting group description:	
0.005% Latanoprost Aqueous solution containing the active ingredient, latanoprost 0.05 mg/mL, water for injections.	

Reporting group values	DE-126	Latanoprost	Total
Number of subjects	17	16	33
Age categorical 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)	7	9	16
From 65-84 years	10	7	17
85 years and over	0	0	0
Age continuous Units: years			
arithmetic mean	62.6	64.6	
standard deviation	± 13.16	± 8.17	-
Gender categorical Units: Subjects			
Female	7	11	18
Male	10	5	15
Race Units: Subjects			
White	17	16	33
Black or African American	0	0	0
Asian	0	0	0
American Indian or Alaska Native	0	0	0
Native Hawaiian or Other Pacific Islander	0	0	0
Not Reported	0	0	0
Unknown	0	0	0
Multiple	0	0	0
Ethnicity Units: Subjects			
Hispanic or Latino	0	0	0
Not Hispanic or Latino	17	16	33

Unknown	0	0	0

End points

End points reporting groups	
Reporting group title	DE-126
Reporting group description:	
0.002% DE-126 Aqueous solution containing 0.02 mg/mL DE-126, and water for injections.	
Reporting group title	Latanoprost
Reporting group description:	
0.005% Latanoprost Aqueous solution containing the active ingredient, latanoprost 0.05 mg/mL, water for injections.	

Primary: 24-hour mean IOP at Month 3	
End point title	24-hour mean IOP at Month 3
End point description:	
24hr mean IOP at Month 3	
End point type	Primary
End point timeframe:	
The primary efficacy endpoint evaluated the study eye 24-hour mean IOP at Month 3, measured at 4h (24:00), 8h (04:00), 12h (08:00), 16h (12:00), 20h (16:00), and 24h (20:00) after the last dose given the previous night at 20:00.	

End point values	DE-126	Latanoprost		
Subject group type	Reporting group	Reporting group		
Number of subjects analysed	16	16		
Units: mmHg				
arithmetic mean (standard error)	17.31 (± 0.783)	18.19 (± 0.604)		

Statistical analyses

Statistical analysis title	Mean 24-Hour IOP at Month 3
Statistical analysis description:	
DE-126 v Latanoprost	
Comparison groups	DE-126 v Latanoprost
Number of subjects included in analysis	32
Analysis specification	Pre-specified
Analysis type	other[1]
Parameter estimate	Mean difference (final values)
Point estimate	0

Confidence interval	
level	95 %
sides	2-sided
lower limit	-2.89
upper limit	1.14

Notes:

[1] - This is an exploratory study, and no hypothesis testing was performed.

Secondary: Mean 24-Hour IOP at Week 6

End point title	Mean 24-Hour IOP at Week 6

End point description:

24-hour mean IOP at Week 6.

End point type	Secondary

End point timeframe:

The study eye 24-hour mean IOP at Week 6, measured at 4h (24:00), 8h (04:00), 12h (08:00), 16h (12:00), 20h (16:00), and 24h (20:00) after the last dose given the previous night at 20:00 was summarized for the analysis of the first secondary endpoint.

End point values	DE-126	Latanoprost		
Subject group type	Reporting group	Reporting group		
Number of subjects analysed	17	16		
Units: mmHg				
arithmetic mean (standard error)	17.38 (± 0.763)	18.53 (± 0.769)		

Statistical analyses

No statistical analyses for this end point

Secondary: Mean Diurnal IOP at Week 6

End point title	Mean Diurnal IOP at Week 6

End point description:

End point type	Secondary

End point timeframe:

Mean diurnal IOP reflected IOP measurement values for the 08:00, 12:00, 16:00 and 20:00 hour timepoints.

End point values	DE-126	Latanoprost		
Subject group type	Reporting group	Reporting group		
Number of subjects analysed	17	16		
Units: mmHg				
arithmetic mean (standard error)				
Mean diurnal IOP	17.28 (± 0.774)	18.40 (± 0.771)		

Statistical analyses

No statistical analyses for this end point

Secondary: Mean Diurnal IOP at Month 3

End point title	Mean Diurnal IOP at Month 3

End point description:

End point type	Secondary

End point timeframe:

Mean diurnal IOP reflected IOP measurement values for the 08:00, 12:00, 16:00 and 20:00 hour timepoints.

End point values	DE-126	Latanoprost		
Subject group type	Reporting group	Reporting group		
Number of subjects analysed	16	16		
Units: mmHg				
arithmetic mean (standard error)				
Mean diurnal IOP	17.55 (± 0.737)	18.06 (± 0.598)		

Statistical analyses

No statistical analyses for this end point

Adverse events

Adverse events information

Timeframe for reporting adverse events:

Adverse events in this study were collected irrespective of their relationship to the clinical study, following informed consent and until subject withdrawal or study exit.

Assessment type	Systematic

Dictionary used

Dictionary name	MedDRA
Dictionary version	23.1

Reporting groups

Reporting group title	0.002% DE-126
Reporting group description: -	
Reporting group title	0.005% Latanoprost

Reporting group description: -

Serious adverse events	0.002% DE-126	0.005% Latanoprost	
Total subjects affected by serious adverse events			
subjects affected / exposed	2 / 17 (11.76%)	0 / 16 (0.00%)	
number of deaths (all causes)	1	0	
number of deaths resulting from adverse events	0	0	
Musculoskeletal and connective tissue disorders			
Osteoarthritis			
subjects affected / exposed	1 / 17 (5.88%)	0 / 16 (0.00%)	
occurrences causally related to treatment / all	0 / 1	0 / 0	
deaths causally related to treatment / all	0 / 0	0 / 0	
Infections and infestations			
COVID-19 pneumonia			
subjects affected / exposed	1 / 17 (5.88%)	0 / 16 (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: 0 %

Non-serious adverse events	0.002% DE-126	0.005% Latanoprost	
Total subjects affected by non-serious adverse events			
subjects affected / exposed	10 / 17 (58.82%)	11 / 16 (68.75%)	

Injury, poisoning and procedural complications			
Corneal abrasion			
subjects affected / exposed	1 / 17 (5.88%)	0 / 16 (0.00%)	
occurrences (all)	1	0	
General disorders and administration site conditions			
Instillation site pain			
subjects affected / exposed	2 / 17 (11.76%)	2 / 16 (12.50%)	
occurrences (all)	2	2	
Immune system disorders			
Seasonal allergy			
subjects affected / exposed	0 / 17 (0.00%)	1 / 16 (6.25%)	
occurrences (all)	0	1	
Eye disorders			
Abnormal sensation in eye			
subjects affected / exposed	2 / 17 (11.76%)	2 / 16 (12.50%)	
occurrences (all)	2	2	
Ocular hyperaemia			
subjects affected / exposed	3 / 17 (17.65%)	1 / 16 (6.25%)	
occurrences (all)	3	1	
Eye pruritus			
subjects affected / exposed	0 / 17 (0.00%)	3 / 16 (18.75%)	
occurrences (all)	0	3	
Eye pain			
subjects affected / exposed	1 / 17 (5.88%)	1 / 16 (6.25%)	
occurrences (all)	1	1	
Foreign body sensation in eyes			
subjects affected / exposed	2 / 17 (11.76%)	0 / 16 (0.00%)	
occurrences (all)	1	1	
Eyelid oedema			
subjects affected / exposed	0 / 17 (0.00%)	1 / 16 (6.25%)	
occurrences (all)	0	1	
Vision blurred			
subjects affected / exposed	0 / 17 (0.00%)	1 / 16 (6.25%)	
occurrences (all)	0	1	
Visual impairment			

subjects affected / exposed occurrences (all)	0 / 17 (0.00%) 0	1 / 16 (6.25%) 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