Clinical trial results:
Evaluation of the suitability of PD P 506 A in the photodynamic therapy of Distal Subungual Onychomycosis (DSO) of the great toenail.

Summary

EudraCT number	2014-001493-34
Trial protocol	DE
Global end of trial date	23 August 2017

Results information

Result version number	v1 (current)
This version publication date	23 April 2020
First version publication date	23 April 2020

Trial information

Trial identification

Sponsor protocol code	OM01

Additional study identifiers

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

Notes:

Sponsors

Sponsor organisation name	photonamic GmbH & Co. KG
Sponsor organisation address	Eggerstedter Weg 12, Pinneberg, Germany,
Public contact	Clinical Project Management, photonamic GmbH & Co. KG, info@photonamic.de
Scientific contact	Clinical Project Management, photonamic GmbH & Co. KG, info@photonamic.de

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	01 March 2019
Is this the analysis of the primary completion data?	No

Global end of trial reached?	Yes
Global end of trial date	23 August 2017
Was the trial ended prematurely?	No

Notes:

General information about the trial

Main objective of the trial:

Evaluation of the clinical efficacy of PD P 506 A photodynamic therapy of DSO of the great toenail(s) on nail basis 12 months after treating participants.

Protection of trial subjects:

None specified.

Background therapy: -

Evidence for comparator: -

Actual start date of recruitment	05 January 2015
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	Germany: 22
Worldwide total number of subjects	22
EEA total number of subjects	22

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)	12
From 65 to 84 years	10
85 years and over	0

Subject disposition

Recruitment

Recruitment details: -

Pre-assignment

Screening details:

At Screening Visit, small nail clippings of the diseased toenails were taken for the confirmation of clinical DSO diagnosis using the methods of tests on native preparation, mycological culture, and histopathological examination with periodic acid Schiff (PAS) staining.

Period 1

Period 1 title	Overall trial (overall period)
Is this the baseline period?	Yes
Allocation method	Not applicable
Blinding used	Not blinded

Arms

Arm title	PD P 506 A PDT

Arm description:

PD P 506 A is a square, skin coloured, self-adhesive patch with rounded corners. One patch contains 2 mg 5-aminolevulinic acid (present as 5-aminolevulinic acid hydrochloride) per cm² and has a sizeof 4 cm². As there is evidence from literature that PDT for onychomycosis needs repeating in order to show maximum efficacy, PDT in this study was performed four times in intervals of one week. One patch of PD P 506 A was administered to the patient's diseased great toenail(s) for 4 hours at Visits 1-4. After removal of the study medication and degreasing, the study nail(s) were illuminated (PDT) with a predefined light dose (37 J/cm²) at 630 ± 5 nm.

Arm type	Experimental
Investigational medicinal product name	PD P 506 A
Investigational medicinal product code	
Other name	
Pharmaceutical forms	Cutaneous patch
Routes of administration	Topical use

Dosage and administration details:

One patch of PD P 506 A were administered to the patient's diseased great toenail(s) for four hours at Visits 1 - 4

Number of subjects in period 1	PD P 506 A PDT
Started	22
Completed	14
Not completed	8
Treatment failure or recurrence of DSO	8

Baseline characteristics

Reporting groups	
Reporting group title	Overall trial

Reporting group description: -

Reporting group values	Overall trial	Total	
Number of subjects	22	22	
Age categorical Units: Subjects			
40 - <65 years	12	12	
65 - 75 years	10	10	
Age continuous			
Age (years)			
Units: years			
arithmetic mean	63		
standard deviation	± 8.1	-	
Gender categorical Units: Subjects			
Female	4	4	
Male	18	18	
Number of study nails Units: Subjects			
Patients with 1 study nail	12	12	
Patients with 2 study nails	10	10	

Subject analysis sets	
Subject analysis set title	FAS
Subject analysis set type	Full analysis

Subject analysis set description:

All patients who received at least one application of the study medication and who showed one valid efficacy assessment after last PDT

Subject analysis set title	SFS
Subject analysis set type	Safety analysis

Subject analysis set description:

All patients who received at least one application of the study medication showing at least one safety assessment.

Subject analysis set title	PPS
Subject analysis set type	Per protocol

Subject analysis set description:

All patients who received four applications of study treatment, who showed no major protocol violation, and who provided valid efficacy data at Visit 7 (12 months after last PDT).

Reporting group values	FAS	SFS	PPS
Number of subjects	22	22	21
Age categorical Units: Subjects			
40 - <65 years	12	12	11

65 - 75 years	10	10	10

Age continuous			
Age (years)			
Units: years			
arithmetic mean	63	63	63
standard deviation	± 8.1	± 8.1	± 8.3
Gender categorical			
Units: Subjects			
Female	4	4	4
Male	18	18	17
Number of study nails			
Units: Subjects			
Patients with 1 study nail	12	12	11
Patients with 2 study nails	10	10	10

End points

End points reporting groups

Reporting group title	PD P 506 A PDT

Reporting group description:

PD P 506 A is a square, skin coloured, self-adhesive patch with rounded corners. One patch contains 2 mg 5-aminolevulinic acid (present as 5-aminolevulinic acid hydrochloride) per cm² and has a sizeof 4 cm². As there is evidence from literature that PDT for onychomycosis needs repeating in order to show maximum efficacy, PDT in this study was performed four times in intervals of one week. One patch of PD P 506 A was administered to the patient's diseased great toenail(s) for 4 hours at Visits 1-4. After removal of the study medication and degreasing, the study nail(s) were illuminated (PDT) with a predefined light dose (37 J/cm²) at 630 ± 5 nm.

Subject analysis set title	FAS
Subject analysis set type	Full analysis

Subject analysis set description:

All patients who received at least one application of the study medication and who showed one valid efficacy assessment after last PDT

Subject analysis set title	SFS
Subject analysis set type	Safety analysis

Subject analysis set description:

All patients who received at least one application of the study medication showing at least one safety assessment.

Subject analysis set title	PPS
Subject analysis set type	Per protocol

Subject analysis set description:

All patients who received four applications of study treatment, who showed no major protocol violation, and who provided valid efficacy data at Visit 7 (12 months after last PDT).

Primary: Evaluation of the clinical efficacy of PD P 506 A photodynamic therapy of DSO of the great toenail(s) on nail basis 12 months after treating participants.

End point title	Evaluation of the clinical efficacy of PD P 506 A photodynamic therapy of DSO of the great toenail(s) on nail basis 12 months after treating participants.[1]

End point description:

End point type	Primary

End point timeframe:

12 months after last study treatment

Notes:

[1] - No statistical analyses have been specified for this primary end point. It is expected there is at least one statistical analysis for each primary end point.
Justification: The statistical analysis of study data was done in a descriptive way only. No statistical tests were performed.

End point values	FAS	PPS		
Subject group type	Subject analysis set	Subject analysis set		
Number of subjects analysed	22	21		
Units: % of nails with Clinically Complete Cure				
Toenails with Clinically Complete Cure	0	0		
Tolal toenails treated	32	31		

Statistical analyses

No statistical analyses for this end point

Secondary: Evaluation of the efficacy of PD P 506 A photodynamic therapy of DSO of the great toenail(s) on nail basis 12 months after treating participants as measured by laboratory methods.

End point title	Evaluation of the efficacy of PD P 506 A photodynamic therapy of DSO of the great toenail(s) on nail basis 12 months after treating participants as measured by laboratory methods.

End point description:

Percentage of nails with negative result after 12 months using laboratory methods (KOH test, periodic acid-Schiff (PAS) stain and mycology culture).

End point type	Secondary

End point timeframe:

12 months after the last study treatment

End point values	FAS	PPS		
Subject group type	Subject analysis set	Subject analysis set		
Number of subjects analysed	22	21		
Units: % of nails with negative labor results				
Number of treated toenails	32	31		
Number of toenails with negative KOH test	12	12		
Number of toenails with negative PAS test	7	7		
Number of toenails with negative mycological cultu	17	17		

Statistical analyses

No statistical analyses for this end point

Secondary: Evaluation of the efficacy of PD P 506 A photodynamic therapy of DSO of the great toenail(s) on nail basis 3 and 6 months after treating participants.

End point title	Evaluation of the efficacy of PD P 506 A photodynamic therapy of DSO of the great toenail(s) on nail basis 3 and 6 months after treating participants.

End point description:

End point type	Secondary

End point timeframe:

3 and 6 months after treating participants

End point values	FAS	PPS		
Subject group type	Subject analysis set	Subject analysis set		
Number of subjects analysed	22	21		
Units: % of nails with CCR after 3 and 6 months				
All treated toenails	32	31		
Number of toenails with CCR after 3 months	0	0		
Number of toenails with CCR after 6 months	0	0		

Statistical analyses

No statistical analyses for this end point

Secondary: Evaluation of safety and tolerability of PD P 506 A photodynamic therapy of DSO of the great toenail(s).

End point title	Evaluation of safety and tolerability of PD P 506 A photodynamic therapy of DSO of the great toenail(s).

End point description:

End point type	Secondary

End point timeframe:

During 3m after first PDT

End point values	SFS			
Subject group type	Subject analysis set			
Number of subjects analysed	22			
Units: Freq'cy of AE /local tolerability signs				
Number of Adverse Events	0			
Number of local reactions during patch application	2			
Number of local reactions during illumination	11			
N of local reactions after occl. dressing removal	9			
Number of local reactions	22			
Pts with LR during patch application	1			
Pts with LR during illumination	6			
Pts wth LR after occl dressing removal	6			
Pts with any local reaction	9			

Statistical analyses

No statistical analyses for this end point

Adverse events

Adverse events information	
Timeframe for reporting adverse events:	
Between patient inclusion and Visit 5.	
Assessment type	Systematic

Dictionary used	
Dictionary name	MedDRA
Dictionary version	20.0

Reporting groups	
Reporting group title	Adverse Events
Reporting group description:	
All patients who received at least one application of the study medication showing at least one safety assessment.	
Reporting group title	Local reactions
Reporting group description:	
Local reactions to application of study medication and study procedure (PDT at Visit 1, 2, 3, 4) are known adverse reactions to PD P 506 A-PDT and therefore always regarded as being related to the procedure.	

Serious adverse events	Adverse Events	Local reactions	
Total subjects affected by serious adverse events			
subjects affected / exposed	0 / 22 (0.00%)	0 / 22 (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: 0 %

Non-serious adverse events	Adverse Events	Local reactions	
Total subjects affected by non-serious adverse events			
subjects affected / exposed	0 / 22 (0.00%)	9 / 22 (40.91%)	
General disorders and administration site conditions			
Application site pain			
subjects affected / exposed	0 / 22 (0.00%)	5 / 22 (22.73%)	
occurrences (all)	0	11	
Application site pruritus			
subjects affected / exposed	0 / 22 (0.00%)	3 / 22 (13.64%)	
occurrences (all)	0	6	
Application site erosion			

subjects affected / exposed	0 / 22 (0.00%)	1 / 22 (4.55%)	
occurrences (all)	0	1	
Application site erythema			
subjects affected / exposed	0 / 22 (0.00%)	1 / 22 (4.55%)	
occurrences (all)	0	2	
Application site irritation			
subjects affected / exposed	0 / 22 (0.00%)	1 / 22 (4.55%)	
occurrences (all)	0	1	
Application site paraesthesia			
subjects affected / exposed	0 / 22 (0.00%)	1 / 22 (4.55%)	
occurrences (all)	0	1	

More information

Substantial protocol amendments (globally)

Were there any global substantial amendments to the protocol? Yes

Date	Amendment
18 November 2014	Reason: Request by IEC Westfalen-Lippe (1) Request by competent authority BfArM (2, 3, 4, 5) Amendments: 1. Addition of exclusion criterion "Diagnosis of polyneuropathy" 2. Re-check of inclusion/exclusion criteria on visits 2, 3 and 4 3. Patient to be asked for AEs and changes in concomitant medication at Visit 1 (day of first PDT) 4. Documentation of actions taken in case of local reactions in CRF 5. Documentation of AEs in CRF between patient inclusion and Visit 4 (instead of "between study treatment and Visit 4")
21 April 2015	Reason: Adaptation of inclusion / exclusion criteria due to low recruitment Amendments: 1. Raising of upper maximum age to 75 (instead of 64) 2. Inclusion of female patients. Females need to be postmenopausal or not of childbearing potential because of tubal ligation or hysterectomy.
11 December 2015	Reason: Administrative reasons (1, 3) Change of study sites (2) Amendments: Change of responsibility for PV from medac GmbH to spm² – safety projects & more GmbH including revision of the affected chapters of CSP 2. Site Fürth was replaced by site Detmold (site Fürth had not recruited any patient) 3. Appendices 2 (SPC Alacare) and 3 (SAE form) were replaced by current versions

Notes:

Interruptions (globally)

Were there any global interruptions to the trial? No

Limitations and caveats

None reported