Clinical trial results:
Gastrointestinal Behavior of Posaconazole in Healthy Volunteers

Summary

EudraCT number	2015-002703-28
Trial protocol	BE
Global end of trial date	28 February 2016

Results information

Result version number	v1 (current)
This version publication date	12 February 2020
First version publication date	12 February 2020
Summary attachment (see zip file)	Posaconazole - Tablet - Article (Gastrointestinal-and-Systemic-Monitoring-of-Posaconazole-in-Humans-After-Fasted-and-Fed-State-Administration-of-a-Solid-Dispersion_2016_Journal-of-P.pdf)

Trial information

Trial identification

Sponsor protocol code	DDD15POSA

Additional study identifiers

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

Notes:

Sponsors

Sponsor organisation name	KU Leuven
Sponsor organisation address	Herestraat 49, Leuven, Belgium, 3000
Public contact	Drug Delivery & Disposition, KU Leuven, +32 16330302, bart.hens@pharm.kuleuven.be
Scientific contact	Drug Delivery & Disposition, KU Leuven, +32 16330302, bart.hens@pharm.kuleuven.be

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	28 February 2016
Is this the analysis of the primary completion data?	Yes
Primary completion date	28 February 2016
Global end of trial reached?	Yes
Global end of trial date	28 February 2016
Was the trial ended prematurely?	No

Notes:

General information about the trial

Main objective of the trial:

Study of the gastrointestinal (GI) behavior of posaconazol in healthy volunteers by administerting the Noxafil tablet (posaconazole, 100 mg) in fasted and fed state conditions to five healthy subjects. The obtained data will learn us more about the luminal behavior of posaconazole and the impact of different GI in the GI tract after being administered as a solid dispersion tablet (supersaturation/ precipitation/ dissolution/ ...).

Protection of trial subjects:

Not applicable.

Background therapy: -

Evidence for comparator: -

Actual start date of recruitment	01 August 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	Belgium: 5
Worldwide total number of subjects	5
EEA total number of subjects	5

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)	5
From 65 to 84 years	0
85 years and over	0

Subject disposition

Recruitment

Recruitment details: -

Pre-assignment

Screening details:

Exclusion criteria for this clinical study were gastrointestinal disorders, infection with hepatitis B, hepatitis C, or HIV, use of medication, pregnancy, and frequent X-ray exposure. These criteria were checked for every volunteer during a medical examination.

Period 1

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

Blinding implementation details:

Not relevant.

Arms

Are arms mutually exclusive?	No
Arm title	Fasted state conditions

Arm description:

In the first test condition, one tablet of 100 mg posaconazole was taken orally with 240 mL of water.

Arm type	Experimental
Investigational medicinal product name	Posaconazole
Investigational medicinal product code	
Other name	
Pharmaceutical forms	Tablet
Routes of administration	Oral use

Dosage and administration details:

In the first test condition, one tablet of 100 mg posaconazole was taken orally with 240 mL of water. In the second test condition, volunteers were asked to drink 400 mL of Ensure Plus® nutrient shake (Abbott Laboratories B.V., Zwolle, The Netherlands), 20 min prior to oral intake of the tablet with 240 mL of water.

Arm title	Fed state conditions

Arm description:

In the second test condition, volunteers were asked to drink 400 mL of Ensure Plus® nutrient shake (Abbott Laboratories B.V., Zwolle, The Netherlands), 20 min prior to oral intake of the tablet with 240 mL of water.

Arm type	Experimental
Investigational medicinal product name	Posaconazole
Investigational medicinal product code	
Other name	
Pharmaceutical forms	Tablet
Routes of administration	Oral use

Dosage and administration details:

In the second test condition, volunteers were asked to drink 400 mL of Ensure Plus® nutrient shake (Abbott Laboratories B.V., Zwolle, The
Netherlands), 20 min prior to oral intake of the tablet (100 mg) with 240 mL of water.

Number of subjects in period 1	Fasted state conditions	Fed state conditions
Started	5	4
Completed	5	4

Baseline characteristics

Reporting groups	
Reporting group title	Fasted state conditions
Reporting group description:	
In the first test condition, one tablet of 100 mg posaconazole was taken orally with 240 mL of water.	
Reporting group title	Fed state conditions
Reporting group description:	
In the second test condition, volunteers were asked to drink 400 mL of Ensure Plus® nutrient shake (Abbott Laboratories B.V., Zwolle, The Netherlands), 20 min prior to oral intake of the tablet with 240 mL of water.	

Reporting group values	Fasted state conditions	Fed state conditions	Total
Number of subjects	5	4	9
Age categorical Units: Subjects			
In utero Preterm newborn infants (gestational age < 37 wks) Newborns (0-27 days) Infants and toddlers (28 days-23 months) Children (2-11 years) Adolescents (12-17 years) Adults (18-64 years) From 65-84 years 85 years and over			
Age continuous Units: years			
arithmetic mean	23	23	
full range (min-max)	21 to 26	21 to 26	-
Gender categorical Units: Subjects			
Female	1	1	2
Male	4	3	7

End points

End points reporting groups	
Reporting group title	Fasted state conditions
Reporting group description:	
In the first test condition, one tablet of 100 mg posaconazole was taken orally with 240 mL of water.	
Reporting group title	Fed state conditions
Reporting group description:	
In the second test condition, volunteers were asked to drink 400 mL of Ensure Plus® nutrient shake (Abbott Laboratories B.V., Zwolle, The Netherlands), 20 min prior to oral intake of the tablet with 240 mL of water.	

Primary: Gastrointestinal and plasma AUC, Cmax and Tmax	
End point title	Gastrointestinal and plasma AUC, Cmax and Tmax
End point description:	
In order to determine dissolved concentrations of posaconazole in gastrointestinal fluids, aspirates were immediately centrifuged (20,817 g, 5 min) and the supernatant was 20-fold diluted in mobile phase (methanol: 25 mM acetic acid buffer pH 3.5 [85:15 vol/vol]). To determine the total posaconazole content (i.e., solute + solid), aspirates were directly diluted 20-fold in mobile phase. In both cases, precipitated proteins were separated with an additional centrifugation step (20,817 g, 5 min, 37°C). Samples were analyzed by HPLC-FLUO.	
End point type	Primary
End point timeframe:	
GI concentrations up to 4 h and plasma samples up to 24 h	

End point values	Fasted state conditions	Fed state conditions		
Subject group type	Reporting group	Reporting group		
Number of subjects analysed	5	4		
Units: micromolar (concentration)				
number (not applicable)	5	4		

Statistical analyses

Statistical analysis title	Data Presentation and Statistical Analysis
Comparison groups	Fed state conditions v Fasted state conditions
Number of subjects included in analysis	9
Analysis specification	Post-hoc
Analysis type	equivalence
P-value	< 0.05
Method	t-test, 1-sided

Adverse events

Adverse events information[1]	
Timeframe for reporting adverse events:	
No adverse events were noted during or after this study.	
Assessment type	Systematic

Dictionary used	
Dictionary name	Excel file
Dictionary version	office 365

Frequency threshold for reporting non-serious adverse events: 0 %

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: There were no adverse events noted.

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

Limitations of the trial such as small numbers of subjects analysed or technical problems leading to unreliable data.

Not applicable.

Notes:

Online references

http://www.ncbi.nlm.nih.gov/pubmed/27178739