



Clinical trial results:

The effect of Prucalopride (Resolor) on gastric motor function and gastric sensitivity

Summary

EudraCT number	2013-002705-65
Trial protocol	BE
Global end of trial date	27 July 2015

Results information

Result version number	v1 (current)
This version publication date	11 February 2021
First version publication date	11 February 2021

Trial information

Trial identification

Sponsor protocol code	PrucaloprideGastro1
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Additional study identifiers

ISRCTN number	-
ClinicalTrials.gov id (NCT number)	NCT04429802
WHO universal trial number (UTN)	-

Notes:

Sponsors

Sponsor organisation name	UZLeuven KULeuven
Sponsor organisation address	Herestraat 49, Leuven, Belgium, 3000
Public contact	Jan Tack, TARGID, 0034 16344225, jan.tack@kuleuven.be
Scientific contact	Florencia Carbone, TARGID, 0034 16330824, florencia.carbone@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	03 February 2020
Is this the analysis of the primary completion data?	No
Global end of trial reached?	Yes
Global end of trial date	27 July 2015
Was the trial ended prematurely?	No

Notes:

General information about the trial

Main objective of the trial:

The aim of this study is to investigate the effect prucalopride on the gastric motor function. The gastric manometry and the gastric barostat will be used in order to gain more information about its effect on gastric accommodation and gastric sensitivity.

Protection of trial subjects:

not applicable

Background therapy: -

Evidence for comparator: -

Actual start date of recruitment	18 October 2013
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: 17
Worldwide total number of subjects	17
EEA total number of subjects	17

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)	17
From 65 to 84 years	0
85 years and over	0

Subject disposition

Recruitment

Recruitment details:

Healthy volunteers (HVs), recruited by public advertisement

Pre-assignment

Screening details:

HVs had to be devoid of GI symptoms and of the use of medications known to influence the GI motility.

Period 1

Period 1 title	gastric barostat study
Is this the baseline period?	Yes
Allocation method	Randomised - controlled
Blinding used	Single blind
Roles blinded	Subject

Arms

Are arms mutually exclusive?	No
Arm title	prucalopride 2 mg

Arm description:

single-blind randomized controlled cross-over gastric barostat study (placebo vs. prucalopride 2 mg).

Arm type	Experimental
Investigational medicinal product name	prucalopride 2 mg
Investigational medicinal product code	
Other name	
Pharmaceutical forms	Tablet
Routes of administration	Oral use

Dosage and administration details:

prucalopride 2 mg, taken orally only once at timepoint 2 hours before the meal during the barostat measurement.

Arm title	placebo
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Arm description:

single-blind randomized controlled cross-over gastric barostat study (placebo vs. prucalopride 2 mg).

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

Dosage and administration details:

placebo tablet, taken orally only once at timepoint 2 hours before the meal during the barostat measurement.

Number of subjects in period 1	prucalopride 2 mg	placebo
Started	12	12
Completed	12	12

Period 2

Period 2 title	intra gastric pressure measurement
Is this the baseline period?	No
Allocation method	Randomised - controlled
Blinding used	Single blind
Roles blinded	Subject

Arms

Are arms mutually exclusive?	No
Arm title	prucalopride 2 mg

Arm description:

single-blind randomized controlled cross-over intra gastric pressure measurement study (placebo vs. prucalopride 2 mg).

Arm type	Experimental
Investigational medicinal product name	prucalopride 2 mg
Investigational medicinal product code	
Other name	
Pharmaceutical forms	Tablet
Routes of administration	Oral use

Dosage and administration details:

prucalopride 2 mg, taken orally only once at timepoint 2 hours before the meal during the IGP measurement.

Arm title	placebo
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Arm description:

single-blind randomized controlled cross-over intra gastric pressure measurement study (placebo vs. prucalopride 2 mg).

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

Dosage and administration details:

placebo tablet, taken orally only once at timepoint 2 hours before the meal during the IGP measurement.

Number of subjects in period 2	prucalopride 2 mg	placebo
Started	15	15
Completed	15	15

Baseline characteristics

Reporting groups^[1]

Reporting group title	gastric barostat study
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Reporting group description: -

Notes:

[1] - The number of subjects reported to be in the baseline period is not equal to the worldwide number of subjects enrolled in the trial. It is expected that these numbers will be the same.

Justification: In total 17 different subjects participated in the whole study.

10 subjects participated in both part 1 and part 2.

In total 12 subjects participated in part 1, i.e. the barostat study part

In total 15 subjects participated in part 2, i.e. the intragastric measurement part

Reporting group values	gastric barostat study	Total	
Number of subjects	12	12	
Age categorical			
healty volunteers			
Units: Subjects			
In utero	0	0	
Preterm newborn infants (gestational age < 37 wks)	0	0	
Newborns (0-27 days)	0	0	
Infants and toddlers (28 days-23 months)	0	0	
Children (2-11 years)	0	0	
Adolescents (12-17 years)	0	0	
Adults (18-64 years)	12	12	
From 65-84 years	0	0	
85 years and over	0	0	
Age continuous			
healty volunteers			
Units: years			
arithmetic mean	32		
standard deviation	± 1.7	-	
Gender categorical			
Units: Subjects			
Female	7	7	
Male	5	5	

End points

End points reporting groups

Reporting group title	prucalopride 2 mg
Reporting group description: single-blind randomized controlled cross-over gastric barostat study (placebo vs. prucalopride 2 mg).	
Reporting group title	placebo
Reporting group description: single-blind randomized controlled cross-over gastric barostat study (placebo vs. prucalopride 2 mg).	
Reporting group title	prucalopride 2 mg
Reporting group description: single-blind randomized controlled cross-over intragastric pressure measurement study (placebo vs. prucalopride 2 mg).	
Reporting group title	placebo
Reporting group description: single-blind randomized controlled cross-over intragastric pressure measurement study (placebo vs. prucalopride 2 mg).	

Primary: difference in gastric pressure and compliance between prucalopride vs placebo

End point title	difference in gastric pressure and compliance between prucalopride vs placebo
End point description: In the gastric sensitivity studies, for each 2 min distending period, the mean intragastric volume was calculated. The perception threshold was defined as the first level of pressure and the corresponding volume that evoked a perception score of 1 or more. Discomfort threshold was defined as the first level of pressure and the corresponding volume that provoked a sensation score of five or more. The gastric compliance of the subjects was calculated as the slope of the volume/pressure curve. The gastric sensitivity to distention of the subjects was calculated as the slope of the sensitivity scores/pressure curve.	
End point type	Primary
End point timeframe: Cross over study. Results of the gastric pressures during part 1, i.e. barostat study between placebo and prucalopride	

End point values	prucalopride 2 mg	placebo		
Subject group type	Reporting group	Reporting group		
Number of subjects analysed	12	12		
Units: mmHg				
arithmetic mean (standard deviation)	9.8 (± 0.4)	10 (± 0.5)		

Statistical analyses

Statistical analysis title	gastric pressures. cross over. pruc vs placebo
Comparison groups	prucalopride 2 mg v placebo

Number of subjects included in analysis	24
Analysis specification	Pre-specified
Analysis type	superiority
P-value	= 0.61 ^[1]
Method	t-test, 2-sided

Notes:

[1] - In all analyses, $p < 0.05$ was considered significant.

all analyses resulted in not significant differences between prucalopride and placebo

Primary: effect of prucalopride on distal stomach intragastric pressure

End point title	effect of prucalopride on distal stomach intragastric pressure
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End point description:

End point type	Primary
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End point timeframe:

During the second hour before the meal. This is one hour after prucalopride (2 mg)/placebo intake

End point values	prucalopride 2 mg	placebo		
Subject group type	Reporting group	Reporting group		
Number of subjects analysed	15 ^[2]	15 ^[3]		
Units: area under the IGP curve (AUC)				
arithmetic mean (standard deviation)	345.6 (\pm 57.2)	126.7 (\pm 80)		

Notes:

[2] - cross over study

[3] - cross over study

Statistical analyses

Statistical analysis title	Effect of prucalopride on distal stomach IGP
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Statistical analysis description:

During the second hour before the meal, the AUC was increased after prucalopride treatment compared to placebo (n=15, AUC prucalopride: 345.6 \pm 57.2 mmHg.min⁻¹ and AUC placebo: 126.7 \pm 80 mmHg.min⁻¹; $p=0.05$).

Comparison groups	prucalopride 2 mg v placebo
Number of subjects included in analysis	30
Analysis specification	Pre-specified
Analysis type	superiority
P-value	= 0.05
Method	t-test, 2-sided

Adverse events

Adverse events information

Timeframe for reporting adverse events:

For each individual, corresponds to timeframe of study participation (from signing of informed consent until last visit).

Adverse event reporting additional description:

Symptoms scored during measurements using VAS are not considered adverse events.

After prucalopride intake, some healthy volunteers suffered from nausea and vomiting resulting in a premature stop of the barostat measurement. These symptoms are considered as adverse events.

Assessment type	Non-systematic
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Dictionary used

Dictionary name	MedDRA
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Dictionary version	23
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Reporting groups

Reporting group title	subjects participating in barostat study
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Reporting group description:

Adverse events after the intake of prucalopride was only seen during the barostat study.

Suggesting that the gastric volume measurements after the meal during treatment with prucalopride may reflect nausea-related events, induced by prucalopride in the presence of a distending barostat bag in the stomach, rather than a true effect of prucalopride on the proximal stomach of the subjects. This interpretation is supported by our observations in the IGP studies.

Serious adverse events	subjects participating in barostat study		
Total subjects affected by serious adverse events			
subjects affected / exposed	0 / 12 (0.00%)		
number of deaths (all causes)	0		
number of deaths resulting from adverse events	0		

Frequency threshold for reporting non-serious adverse events: 5 %

Non-serious adverse events	subjects participating in barostat study		
Total subjects affected by non-serious adverse events			
subjects affected / exposed	7 / 12 (58.33%)		
Gastrointestinal disorders			
nausea			
subjects affected / exposed	7 / 12 (58.33%)		
occurrences (all)	7		
Vomiting			

subjects affected / exposed	4 / 12 (33.33%)		
occurrences (all)	4		

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