Clinical trial results:
Influence of single nucleotide polymorphisms of carboxypeptidase D (CPD) gene on body weight and fat mass reduction by perindopril in obese subjects: A phase II, multicenter, double-blind study.

Summary

EudraCT number	2015-004275-70
Trial protocol	PT
Global end of trial date	27 April 2017

Results information

Result version number	v1 (current)
This version publication date	27 April 2024
First version publication date	27 April 2024
Summary attachment (see zip file)	CSR Synopsis (GPD-01-01-Synopsis.pdf) Trial premature ended (Trial premature ended.pdf)

Trial information

Trial identification

Sponsor protocol code	GPD-01-01

Additional study identifiers

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

Notes:

Sponsors

Sponsor organisation name	Gene PreDiT SA
Sponsor organisation address	BIOCANT PARK - Parque Tecnológico de Cantanhede, Núcleo 04, Lote 4-A, Edifício Biocant II, Cantanhede, Portugal, 3060-197
Public contact	Gene PreDiT SA, Gene PreDiT SA, 00351 231410893, andre.faustino@genepredit.com.pt
Scientific contact	Blueclinical - Investigacao e Desenvolvimento em Saude, Lda, Blueclinical - Investigacao e Desenvolvimento em Saude, Lda, 00351 220995159 , regulatory@blueclinical.pt

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	25 July 2017
Is this the analysis of the primary completion data?	No

Global end of trial reached?	Yes
Global end of trial date	27 April 2017
Was the trial ended prematurely?	Yes

Notes:

General information about the trial

Main objective of the trial:

To evaluate CPD genotyping as a predictive biomarker of body weight and/or fat mass reduction in obese patients treated with perindopril.

Protection of trial subjects:

This is a Phase II study and was not foreseen additional risks that required additional safety measures.Nevertheless, the safety of the participants was ensured during the whole study.

Background therapy: -

Evidence for comparator: -

Actual start date of recruitment	02 March 2016
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	Portugal: 140
Worldwide total number of subjects	140
EEA total number of subjects	140

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)	140
From 65 to 84 years	0
85 years and over	0

Subject disposition

Recruitment

Recruitment details:

Subjects were recruited by each clinical trial site based on the eligilibity criteria.

Pre-assignment

Screening details:

Screening consisted of discussion of informed consent, collection of demographic data, body height, body weight, body mass index (BMI), waist and hip circumference, body fat measurement, medical history, physical examination, and vital signs. Blood samples were collected for CDP genptyping and for hematology, biochemistry and serum pregnancy tests.

Period 1

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

Blinding implementation details:

By maintaining the CPD genotype blinded until the study database is locked, double blinding was possible without using placebo.

Arms

Arm title	Test
Arm description: -	
Arm type	Experimental
Investigational medicinal product name	Perindopril Bluepharma
Investigational medicinal product code	
Other name	
Pharmaceutical forms	Tablet
Routes of administration	Oral use

Dosage and administration details:

Patients were administred perindopril 8 mg, once daily, for 12 weeks, concomitantly with the previously established standardized nonpharmacological therapy.

Number of subjects in period 1[1]	Test
Started	134
Completed	106
Not completed	28
Adverse event, non-fatal	9
Not specified	18
Pregnancy	1

Notes:

[1] - The number of subjects reported to be in the baseline period are not the same as the worldwide number enrolled in the trial. It is expected that these numbers will be the same.
Justification: Actual number of subjects enrolled and analyzed for safety = 140 subjects; number of intention-to-treat (ITT) population = 134; number of per protocol (PP) population = 106 subjects.

Baseline characteristics

Reporting groups	
Reporting group title	Overall trial

Reporting group description: -

Reporting group values	Overall trial	Total	
Number of subjects	134	134	
Age categorical Units: Subjects			
Adults (18-64 years)	134	134	
From 65-84 years	0	0	
85 years and over	0	0	
Gender categorical Units: Subjects			
Female	79	79	
Male	55	55	

End points

End points reporting groups

Reporting group title	Test

Reporting group description: -

Primary: Response rate (proportion of patients who lost at least 3% of body weight from end of the run-in period to the end of the perindopril treatment period)

End point title	Response rate (proportion of patients who lost at least 3% of body weight from end of the run-in period to the end of the perindopril treatment period)[1]

End point description:

End point type	Primary

End point timeframe:

From end of the run-in period to the end of the perindopril treatment period.

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: It is not possible to include a statistical analyses since there is no comparison group in the section "Statistical analyses".

End point values	Test			
Subject group type	Reporting group			
Number of subjects analysed	134			
Units: Kg				
least squares mean (confidence interval 95%)	-0.03 (-0.94 to 0.88)			

Statistical analyses

No statistical analyses for this end point

Primary: Response rate (proportion of patients who lost at least 3% of fat mass from end of the run-in period to the end of the perindopril treatment period)

End point title	Response rate (proportion of patients who lost at least 3% of fat mass from end of the run-in period to the end of the perindopril treatment period)[2]

End point description:

End point type	Primary

End point timeframe:

From end of the run-in period to the end of the perindopril treatment period.

Notes:

[2] - 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: It is not possible to include a statistical analyses since there is no comparison group in the section "Statistical analyses".

End point values	Test			
Subject group type	Reporting group			
Number of subjects analysed	134			
Units: Kg				
least squares mean (confidence interval 95%)	0.47 (-0.61 to 1.55)			

Statistical analyses

No statistical analyses for this end point

Adverse events

Adverse events information	
Timeframe for reporting adverse events: From the start of treatment period to end of treatment period.	
Assessment type	Systematic

Dictionary used	
Dictionary name	MedDRA
Dictionary version	20.0

Reporting groups	
Reporting group title	Overall trial

Reporting group description: -

Serious adverse events	Overall trial		
Total subjects affected by serious adverse events			
subjects affected / exposed	1 / 140 (0.71%)		
number of deaths (all causes)	0		
number of deaths resulting from adverse events	0		
Pregnancy, puerperium and perinatal conditions			
Pregnancy			
subjects affected / exposed	1 / 140 (0.71%)		
occurrences causally related to treatment / all	0 / 1		
deaths causally related to treatment / all	0 / 0		

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

Non-serious adverse events	Overall trial		
Total subjects affected by non-serious adverse events			
subjects affected / exposed	87 / 140 (62.14%)		
Vascular disorders			
Haemorrhage			
subjects affected / exposed	1 / 140 (0.71%)		
occurrences (all)	1		
Hypertension			
subjects affected / exposed	2 / 140 (1.43%)		
occurrences (all)	2		
Hypotension			

subjects affected / exposed	4 / 140 (2.86%)		
occurrences (all)	4		
Orthostatic hypotension			
subjects affected / exposed	1 / 140 (0.71%)		
occurrences (all)	1		
Surgical and medical procedures			
Endodontic procedure			
subjects affected / exposed	1 / 140 (0.71%)		
occurrences (all)	1		
General disorders and administration site conditions			
Influenza like illness			
subjects affected / exposed	2 / 140 (1.43%)		
occurrences (all)	2		
Pyrexia			
subjects affected / exposed	1 / 140 (0.71%)		
occurrences (all)	1		
Oedema peripheral			
subjects affected / exposed	1 / 140 (0.71%)		
occurrences (all)	1		
Fatigue			
subjects affected / exposed	2 / 140 (1.43%)		
occurrences (all)	2		
Reproductive system and breast disorders			
Dysmenorrhoea			
subjects affected / exposed	1 / 140 (0.71%)		
occurrences (all)	1		
Metrorrhagia			
subjects affected / exposed	1 / 140 (0.71%)		
occurrences (all)	2		
Respiratory, thoracic and mediastinal disorders			
Cough			
subjects affected / exposed	18 / 140 (12.86%)		
occurrences (all)	20		
Dyspnoea			

subjects affected / exposed	1 / 140 (0.71%)		
occurrences (all)	1		
Laryngeal discomfort			
subjects affected / exposed	1 / 140 (0.71%)		
occurrences (all)	1		
Rhinorrhoea			
subjects affected / exposed	3 / 140 (2.14%)		
occurrences (all)	3		
Dry throat			
subjects affected / exposed	1 / 140 (0.71%)		
occurrences (all)	1		
Oropharyngeal pain			
subjects affected / exposed	1 / 140 (0.71%)		
occurrences (all)	1		
Psychiatric disorders			
Anxiety			
subjects affected / exposed	3 / 140 (2.14%)		
occurrences (all)	3		
Eating disorder			
subjects affected / exposed	1 / 140 (0.71%)		
occurrences (all)	1		
Investigations			
Blood glucose abnormal			
subjects affected / exposed	3 / 140 (2.14%)		
occurrences (all)	3		
Blood glucose increased			
subjects affected / exposed	4 / 140 (2.86%)		
occurrences (all)	4		
Low density lipoprotein increased			
subjects affected / exposed	1 / 140 (0.71%)		
occurrences (all)	1		
Blood cholesterol increased			
subjects affected / exposed	3 / 140 (2.14%)		
occurrences (all)	3		
Weight increased			

subjects affected / exposed occurrences (all)	1 / 140 (0.71%) 1		
Injury, poisoning and procedural complications Bite subjects affected / exposed occurrences (all) Arthropod sting subjects affected / exposed occurrences (all) Foot fracture subjects affected / exposed occurrences (all) Limb injury subjects affected / exposed occurrences (all)	 1 / 140 (0.71%) 1 1 / 140 (0.71%) 1 1 / 140 (0.71%) 1 2 / 140 (1.43%) 2		
Cardiac disorders Palpitations subjects affected / exposed occurrences (all) Tachycardia subjects affected / exposed occurrences (all)	 1 / 140 (0.71%) 1 3 / 140 (2.14%) 3		
Nervous system disorders Headache subjects affected / exposed occurrences (all) Dizziness subjects affected / exposed occurrences (all) Dysgeusia subjects affected / exposed occurrences (all) Cervical cord compression subjects affected / exposed occurrences (all) Presyncope	 8 / 140 (5.71%) 8 8 / 140 (5.71%) 8 1 / 140 (0.71%) 1 1 / 140 (0.71%) 1		

subjects affected / exposed occurrences (all)	4 / 140 (2.86%) 4		
Balance disorder subjects affected / exposed occurrences (all)	1 / 140 (0.71%) 1		
Somnolence subjects affected / exposed occurrences (all)	1 / 140 (0.71%) 1		
Paraesthesia subjects affected / exposed occurrences (all)	2 / 140 (1.43%) 2		
Radicular pain subjects affected / exposed occurrences (all)	1 / 140 (0.71%) 1		
Sciatica subjects affected / exposed occurrences (all)	1 / 140 (0.71%) 1		
Tremor subjects affected / exposed occurrences (all)	1 / 140 (0.71%) 1		
Blood and lymphatic system disorders			
Eosinophilia subjects affected / exposed occurrences (all)	1 / 140 (0.71%) 1		
Microcytosis subjects affected / exposed occurrences (all)	1 / 140 (0.71%) 1		
Ear and labyrinth disorders			
Excessive cerumen production subjects affected / exposed occurrences (all)	1 / 140 (0.71%) 1		
Vertigo subjects affected / exposed occurrences (all)	1 / 140 (0.71%) 1		
Eye disorders			

Macular oedema			
subjects affected / exposed	1 / 140 (0.71%)		
occurrences (all)	1		
Visual acuity reduced			
subjects affected / exposed	1 / 140 (0.71%)		
occurrences (all)	1		
Gastrointestinal disorders			
Frequent bowel movements			
subjects affected / exposed	1 / 140 (0.71%)		
occurrences (all)	1		
Anorectal discomfort			
subjects affected / exposed	1 / 140 (0.71%)		
occurrences (all)	1		
Dental caries			
subjects affected / exposed	2 / 140 (1.43%)		
occurrences (all)	2		
Diarrhoea			
subjects affected / exposed	4 / 140 (2.86%)		
occurrences (all)	4		
Abdominal pain upper			
subjects affected / exposed	2 / 140 (1.43%)		
occurrences (all)	2		
Dyspepsia			
subjects affected / exposed	1 / 140 (0.71%)		
occurrences (all)	1		
Haemorrhoids			
subjects affected / exposed	1 / 140 (0.71%)		
occurrences (all)	1		
Nausea			
subjects affected / exposed	3 / 140 (2.14%)		
occurrences (all)	3		
Odynophagia			
subjects affected / exposed	2 / 140 (1.43%)		
occurrences (all)	2		
Toothache			

subjects affected / exposed	1 / 140 (0.71%)		
occurrences (all)	1		
Vomiting			
subjects affected / exposed	1 / 140 (0.71%)		
occurrences (all)	1		
Renal and urinary disorders			
Urogenital disorder			
subjects affected / exposed	1 / 140 (0.71%)		
occurrences (all)	1		
Endocrine disorders			
Hyperprolactinaemia			
subjects affected / exposed	1 / 140 (0.71%)		
occurrences (all)	1		
Musculoskeletal and connective tissue disorders			
Back pain			
subjects affected / exposed	4 / 140 (2.86%)		
occurrences (all)	4		
Arthralgia			
subjects affected / exposed	4 / 140 (2.86%)		
occurrences (all)	4		
Musculoskeletal pain			
subjects affected / exposed	2 / 140 (1.43%)		
occurrences (all)	2		
Temporomandibular joint syndrome			
subjects affected / exposed	1 / 140 (0.71%)		
occurrences (all)	1		
Muscle spasms			
subjects affected / exposed	1 / 140 (0.71%)		
occurrences (all)	1		
Groin pain			
subjects affected / exposed	1 / 140 (0.71%)		
occurrences (all)	1		
Pain in extremity			
subjects affected / exposed	1 / 140 (0.71%)		
occurrences (all)	1		
Exostosis			

subjects affected / exposed	1 / 140 (0.71%)		
occurrences (all)	1		
Infections and infestations			
Bronchitis			
subjects affected / exposed	1 / 140 (0.71%)		
occurrences (all)	1		
Nasopharyngitis			
subjects affected / exposed	1 / 140 (0.71%)		
occurrences (all)	1		
Tooth abscess			
subjects affected / exposed	1 / 140 (0.71%)		
occurrences (all)	1		
Influenza			
subjects affected / exposed	2 / 140 (1.43%)		
occurrences (all)	2		
Gastroenteritis			
subjects affected / exposed	2 / 140 (1.43%)		
occurrences (all)	2		
Pharyngitis			
subjects affected / exposed	1 / 140 (0.71%)		
occurrences (all)	1		
Tooth infection			
subjects affected / exposed	1 / 140 (0.71%)		
occurrences (all)	1		
Urinary tract infection			
subjects affected / exposed	1 / 140 (0.71%)		
occurrences (all)	1		
Conjunctivitis viral			
subjects affected / exposed	1 / 140 (0.71%)		
occurrences (all)	1		
Metabolism and nutrition disorders			
Dyslipidaemia			
subjects affected / exposed	9 / 140 (6.43%)		
occurrences (all)	9		
Decreased appetite			

subjects affected / exposed	1 / 140 (0.71%)		
occurrences (all)	1		
Hypertriglyceridaemia			
subjects affected / exposed	3 / 140 (2.14%)		
occurrences (all)	3		
Diabetes mellitus inadequate control			
subjects affected / exposed	1 / 140 (0.71%)		
occurrences (all)	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

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

The interim analysis showed no statistically significant effect of perindopril in the primary and secondary efficacy endpoints. Thus, the study was prematurely terminated at Sponsor's decision.

Notes: