Clinical trial results:
Sodium glucose cotransporter 2 inhibitors or Mineralocorticoid receptor antagonists for the treatment of Albuminuric Chronic Kidney Disease - A randomized controlled trial

Summary

EudraCT number	2022-000740-29
Trial protocol	DK
Global end of trial date	29 March 2023

Results information

Result version number	v1 (current)
This version publication date	06 March 2024
First version publication date	06 March 2024

Trial information

Trial identification

Sponsor protocol code	270389-030122

Additional study identifiers

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

Notes:

Sponsors

Sponsor organisation name	Henrik Birn
Sponsor organisation address	Palle Juul-Jensens Boulevard 35, Aarhus N, Denmark, 8200
Public contact	Frederik Husum Mårup, Department of Renal Medicine, Aarhus University Hospital, fremaa@rm.dk
Scientific contact	Frederik Husum Mårup, Department of Renal Medicine, Aarhus University Hospital, fremaa@rm.dk

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	08 March 2023
Is this the analysis of the primary completion data?	Yes
Primary completion date	08 March 2023
Global end of trial reached?	Yes
Global end of trial date	29 March 2023
Was the trial ended prematurely?	No

Notes:

General information about the trial

Main objective of the trial:

The objective of this trial is to investigate and compare the effect of Finerenone and Dapagliflozine on albuminuria, both separately and in combination, added to treatment with ACE-I/ARB in patients with non-diabetic chronic kidney disease and albuminuria.

Protection of trial subjects:

N/A

Background therapy: -

Evidence for comparator: -

Actual start date of recruitment	29 June 2022
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	Denmark: 20
Worldwide total number of subjects	20
EEA total number of subjects	20

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	8
85 years and over	0

Subject disposition

Recruitment

Recruitment details:

Recruited from the nephrology dept. in Aarhus

Pre-assignment

Screening details:

Patients in the outpatient clinic were pre-screened based on their biochemistry. Eligible patients were invited to the study, and consenting patients were screened.

Period 1

Period 1 title	Period 1
Is this the baseline period?	Yes
Allocation method	Randomised - controlled
Blinding used	Not blinded

Arms

Are arms mutually exclusive?	Yes
Arm title	FINEDAPA

Arm description:

Finerenone first, then Dapagliflozin

Arm type	Active comparator
Investigational medicinal product name	Finerenone
Investigational medicinal product code	
Other name	
Pharmaceutical forms	Tablet
Routes of administration	Oral use

Dosage and administration details:

20mg

Arm title	DAPAFINE

Arm description:

Dapagliflozin first, then finerenone

Arm type	Active comparator
Investigational medicinal product name	Dapagliflozin
Investigational medicinal product code	
Other name	
Pharmaceutical forms	Tablet
Routes of administration	Oral use

Dosage and administration details:

10mg

Number of subjects in period 1	FINEDAPA	DAPAFINE
Started	10	10
Completed	10	10

Period 2	
Period 2 title	Period 2
Is this the baseline period?	No
Allocation method	Randomised - controlled
Blinding used	Not blinded

Arms	
Are arms mutually exclusive?	Yes
Arm title	FINEDAPA

Arm description:

Finerenone first, then Dapagliflozin

Arm type	Active comparator
Investigational medicinal product name	Finerenone
Investigational medicinal product code	
Other name	
Pharmaceutical forms	Tablet
Routes of administration	Oral use

Dosage and administration details:

20mg

Arm title	DAPAFINE

Arm description:

Dapagliflozin first, then finerenone

Arm type	Active comparator
Investigational medicinal product name	Dapagliflozin
Investigational medicinal product code	
Other name	
Pharmaceutical forms	Tablet
Routes of administration	Oral use

Dosage and administration details:

10mg

Number of subjects in period 2	FINEDAPA	DAPAFINE
Started	10	10
Completed	10	10

Baseline characteristics

Reporting groups	
Reporting group title	FINEDAPA
Reporting group description:	
Finerenone first, then Dapagliflozin	
Reporting group title	DAPAFINE
Reporting group description:	
Dapagliflozin first, then finerenone	

Reporting group values	FINEDAPA	DAPAFINE	Total
Number of subjects	10	10	20
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)	4	5	9
From 65-84 years	6	5	11
85 years and over	0	0	0
Age continuous			
Units: years			
arithmetic mean	61	59	
standard deviation	± 17	± 15	-
Gender categorical			
Units: Subjects			
Female	2	3	5
Male	8	7	15
mGFR			
Units: ml/min			
arithmetic mean	37	30	
standard deviation	± 6	± 9	-
eGFR			
Units: ml/min			
arithmetic mean	36	32	
standard deviation	± 5	± 3	-
UACR			
Urine albumine creatinine ratio			
Units: mg/g			
median	449	491	
inter-quartile range (Q1-Q3)	399 to 501	443 to 922	-
Plasma potassium			
Units: mmol/L			
arithmetic mean	4.2	4.1	

standard deviation	± 0.3	± 0.3	-
Systolic BP			
Units: mmHg			
arithmetic mean	127	130	
standard deviation	± 11	± 12	-
Diastolic BP			
Units: mmHg			
arithmetic mean	81	79	
standard deviation	± 8	± 4	-
BMI			
Units: kg/m2			
arithmetic mean	30.6	24.9	
standard deviation	± 4.7	± 5.1	-
24h albuminuria			
Units: mg/day			
median	853	683	
inter-quartile range (Q1-Q3)	512 to 1225	325 to 1087	-

End points

End points reporting groups	
Reporting group title	FINEDAPA
Reporting group description: Finerenone first, then Dapagliflozin	
Reporting group title	DAPAFINE
Reporting group description: Dapagliflozin first, then finerenone	
Reporting group title	FINEDAPA
Reporting group description: Finerenone first, then Dapagliflozin	
Reporting group title	DAPAFINE
Reporting group description: Dapagliflozin first, then finerenone	

Primary: UACR	
End point title	UACR
End point description:	
End point type	Primary
End point timeframe: 8 weeks	

End point values	FINEDAPA	DAPAFINE	FINEDAPA	DAPAFINE
Subject group type	Reporting group	Reporting group	Reporting group	Reporting group
Number of subjects analysed	10	10	10	10
Units: mg/g				
median (confidence interval 95%)	339 (208 to 553)	453 (278 to 738)	304 (188 to 491)	299 (184 to 483)

Statistical analyses	
Statistical analysis title	T-test
Statistical analysis description: Baseline to 8 weeks: Change in both groups combined	
Comparison groups	FINEDAPA v DAPAFINE v FINEDAPA v DAPAFINE

Number of subjects included in analysis	40
Analysis specification	Pre-specified
Analysis type	other
P-value	< 0.001
Method	t-test, 2-sided
Parameter estimate	Mean difference (final values)
Point estimate	-36
Confidence interval	
level	95 %
sides	2-sided
lower limit	-46
upper limit	-24

Secondary: 24h albuminuria

End point title	24h albuminuria

End point description:

End point type	Secondary

End point timeframe:

8 weeks

End point values	FINEDAPA	DAPAFINE	FINEDAPA	DAPAFINE
Subject group type	Reporting group	Reporting group	Reporting group	Reporting group
Number of subjects analysed	10	10	10	10
Units: mg/day				
median (confidence interval 95%)	564 (306 to 1038)	655 (357 to 1201)	497 (285 to 866)	412 (236 to 718)

Statistical analyses

No statistical analyses for this end point

Secondary: mGFR

End point title	mGFR

End point description:

End point type	Secondary

End point timeframe:

8 weeks

End point values	FINEDAPA	DAPAFINE	FINEDAPA	DAPAFINE
Subject group type	Reporting group	Reporting group	Reporting group	Reporting group
Number of subjects analysed	10	10	10	10
Units: ml/min				
arithmetic mean (confidence interval 95%)	34 (29 to 40)	28 (22 to 34)	30 (25 to 35)	24 (19 to 29)

Statistical analyses

No statistical analyses for this end point

Secondary: eGFR

End point title	eGFR

End point description:

End point type	Secondary

End point timeframe:

8 weeks

End point values	FINEDAPA	DAPAFINE	FINEDAPA	DAPAFINE
Subject group type	Reporting group	Reporting group	Reporting group	Reporting group
Number of subjects analysed	10	10	10	10
Units: ml/min				
arithmetic mean (confidence interval 95%)	33 (30 to 36)	31 (29 to 34)	32 (29 to 34)	27 (24 to 29)

Statistical analyses

No statistical analyses for this end point

Secondary: Systolic blood pressure

End point title	Systolic blood pressure

End point description:

End point type	Secondary

End point timeframe:

8 weeks

End point values	FINEDAPA	DAPAFINE	FINEDAPA	DAPAFINE
Subject group type	Reporting group	Reporting group	Reporting group	Reporting group
Number of subjects analysed	10	10	10	10
Units: mmHg				
arithmetic mean (confidence interval 95%)	126 (119 to 132)	125 (118 to 132)	117 (109 to 126)	121 (112 to 129)

Statistical analyses

No statistical analyses for this end point

Adverse events

Adverse events information	
Timeframe for reporting adverse events: 8 weeks	
Assessment type	Systematic
Dictionary used	
Dictionary name	MedDRA
Dictionary version	25.0
Reporting groups	
Reporting group title	FINEDAPA
Reporting group description: Finerenone first, then Dapagliflozin	
Reporting group title	DAPAFINE
Reporting group description: Dapagliflozin first, then finerenone	

Serious adverse events	FINEDAPA	DAPAFINE	
Total subjects affected by serious adverse events			
subjects affected / exposed	0 / 10 (0.00%)	1 / 10 (10.00%)	
number of deaths (all causes)	0	0	
number of deaths resulting from adverse events	0	0	
Cardiac disorders			
Relapse atrial flutter			
subjects affected / exposed	0 / 10 (0.00%)	1 / 10 (10.00%)	
occurrences causally related to treatment / all	0 / 0	0 / 1	
deaths causally related to treatment / all	0 / 0	0 / 0	

Frequency threshold for reporting non-serious adverse events: 1 %

Non-serious adverse events	FINEDAPA	DAPAFINE	
Total subjects affected by non-serious adverse events			
subjects affected / exposed	6 / 10 (60.00%)	5 / 10 (50.00%)	
Cardiac disorders			
Atrial premature complexes			
subjects affected / exposed	1 / 10 (10.00%)	0 / 10 (0.00%)	
occurrences (all)	1	0	
Hypotension			

subjects affected / exposed	1 / 10 (10.00%)	1 / 10 (10.00%)	
occurrences (all)	1	1	
Nervous system disorders			
Headache			
subjects affected / exposed	1 / 10 (10.00%)	0 / 10 (0.00%)	
occurrences (all)	1	0	
Vertigo			
subjects affected / exposed	3 / 10 (30.00%)	0 / 10 (0.00%)	
occurrences (all)	3	0	
Reproductive system and breast disorders			
Erectile dysfunction			
subjects affected / exposed	1 / 10 (10.00%)	0 / 10 (0.00%)	
occurrences (all)	1	0	
Gastrointestinal disorders			
Nausea			
subjects affected / exposed	2 / 10 (20.00%)	0 / 10 (0.00%)	
occurrences (all)	2	0	
Abdominal pain			
subjects affected / exposed	0 / 10 (0.00%)	1 / 10 (10.00%)	
occurrences (all)	0	0	
Skin and subcutaneous tissue disorders			
Skin infection			
subjects affected / exposed	1 / 10 (10.00%)	0 / 10 (0.00%)	
occurrences (all)	1	0	
Renal and urinary disorders			
EGFR decline >25%			
subjects affected / exposed	4 / 10 (40.00%)	1 / 10 (10.00%)	
occurrences (all)	4	1	
Hyperkalaemia (>5.0)			
subjects affected / exposed	1 / 10 (10.00%)	2 / 10 (20.00%)	
occurrences (all)	1	2	
Sinusitis			
subjects affected / exposed	0 / 10 (0.00%)	1 / 10 (10.00%)	
occurrences (all)	0	0	
Psychiatric disorders			

Depression subjects affected / exposed occurrences (all)	1 / 10 (10.00%) 1	0 / 10 (0.00%) 0	
Infections and infestations Upper respiratory tract infection subjects affected / exposed occurrences (all)	0 / 10 (0.00%) 0	1 / 10 (10.00%) 1	

More information

Substantial protocol amendments (globally)

Were there any global substantial amendments to the protocol? Yes

Date	Amendment
19 May 2022	Spironolactone changed to finerenone Inclusion criteria change: eGFR from 25-60 to 25-45 Age from 18-75 to 18-80 Albuminuria from 200-2000 to 150-2000mg/g

Notes:

Interruptions (globally)

Were there any global interruptions to the trial? No

Limitations and caveats

None reported

Online references

http://www.ncbi.nlm.nih.gov/pubmed/38186886