Clinical trial results:
An Open-label, Single Arm Study to Evaluate the Pharmacokinetics of a Single Dose of Intravenous Difelikefalin in Adolescents Aged 12 to 17 Years on Haemodialysis

Summary

EudraCT number	2021-000894-94
Trial protocol	IT
Global end of trial date	30 May 2023

Results information

Result version number	v1 (current)
This version publication date	15 December 2023
First version publication date	15 December 2023

Trial information

Trial identification

Sponsor protocol code	KOR-PED-201

Additional study identifiers

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

Notes:

Sponsors

Sponsor organisation name	Vifor Fresenius Medical Care Renal Pharma Ltd.
Sponsor organisation address	Rechenstrasse 37, St. Gallen, Switzerland, CH-9014
Public contact	Clinical Trial Information Desk, Vifor Fresenius Medical Care Renal Pharma Ltd., +41 588518000, clinicaltrials@cslbehring.com
Scientific contact	Clinical Trial Information Desk, Vifor Fresenius Medical Care Renal Pharma Ltd., +41 588518000, clinicaltrials@cslbehring.com

Notes:

Paediatric regulatory details

Is trial part of an agreed paediatric investigation plan (PIP)	Yes
EMA paediatric investigation plan number(s)	EMEA-002565-PIP02-19
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 August 2023
Is this the analysis of the primary completion data?	Yes
Primary completion date	30 May 2023
Global end of trial reached?	Yes
Global end of trial date	30 May 2023
Was the trial ended prematurely?	No

Notes:

General information about the trial

Main objective of the trial:

To evaluate the pharmacokinetic (PK) profile of a single dose of difelikefalin in adolescent subjects aged 12 to 17 years on haemodialysis (HD).

Protection of trial subjects:

The study was conducted according to the principles of the World Medical Association’s Declaration of Helsinki, and the ICH guidelines for Good Clinical Practices (GCP) as amended.

Background therapy: -

Evidence for comparator: -

Actual start date of recruitment	22 November 2021
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	Lebanon: 5
Country: Number of subjects enrolled	United Kingdom: 3
Worldwide total number of subjects	8
EEA total number of subjects	0

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)	8
Adults (18-64 years)	0
From 65 to 84 years	0
85 years and over	0

Subject disposition

Recruitment

Recruitment details: -

Pre-assignment

Screening details:

The screening visit occurred within 21 calendar days prior to the start of study drug administration.

Period 1

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

Arms

Arm title	Difelikefalin

Arm description: -

Arm type	Experimental
Investigational medicinal product name	Difelikefalin solution (IV formulation)
Investigational medicinal product code	
Other name	
Pharmaceutical forms	Injection
Routes of administration	Intravenous use

Dosage and administration details:

Individual IV doses of difelikefalin were based on subject body weight (0.5 µg/kg dry body weight) and prepared by withdrawing subject-specific volume of study drug with sterile, single-use 1 ml Plastipak syringe (or equivalent) and sterile single-use needles.

Difelikefalin was administered by IV bolus injection within 15 minutes following the end of the dialysis on the scheduled drug administration day. Difelikefalin administration could be done by injection into the dialysis venous line (e.g., into the venous port) or by direct injection into a vein. If the dialysis line was used, following the bolus, the venous line was flushed with at least 10 ml of normal saline.

Number of subjects in period 1	Difelikefalin
Started	8
Completed	8

Baseline characteristics

Reporting groups

Reporting group title	Difelikefalin

Reporting group description: -

Reporting group values	Difelikefalin	Total	
Number of subjects	8	8	
Age categorical 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)	8	8	
Adults (18-64 years)	0	0	
From 65-84 years	0	0	
85 years and over	0	0	
Age continuous Units: years			
arithmetic mean	15.0		
standard deviation	± 2.14	-	
Gender categorical Units: Subjects			
Female	5	5	
Male	3	3	

Subject analysis sets

Subject analysis set title	Pharmacokinetic Analysis Population
Subject analysis set type	Full analysis

Subject analysis set description:

The PK evaluable population includes all subjects who received the dose of study drug and have sufficient plasma concentrations for PK analysis

Reporting group values	Pharmacokinetic Analysis Population		
Number of subjects	7		
Age categorical Units: Subjects			
In utero	0		
Preterm newborn infants (gestational age < 37 wks)	0		
Newborns (0-27 days)	0		
Infants and toddlers (28 days-23 months)	0		
Children (2-11 years)	0		
Adolescents (12-17 years)	7		

Adults (18-64 years)	0		
From 65-84 years	0		
85 years and over	0		
Age continuous			
Units: years			
arithmetic mean	15.1		
standard deviation	± 2.27		
Gender categorical			
Units: Subjects			
Female	4		
Male	3		

End points

End points reporting groups

Reporting group title	Difelikefalin
Reporting group description: -	
Subject analysis set title	Pharmacokinetic Analysis Population
Subject analysis set type	Full analysis

Subject analysis set description:

The PK evaluable population includes all subjects who received the dose of study drug and have sufficient plasma concentrations for PK analysis

Primary: Cmax

End point title	Cmax[1]

End point description:

End point type	Primary

End point timeframe:

Day 1 to 3

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: Only descriptive statistics were included for this PK parameter.

End point values	Pharmacokinetic Analysis Population			
Subject group type	Subject analysis set			
Number of subjects analysed	7			
Units: ng/mL				
arithmetic mean (standard deviation)	6.03 (± 1.81)			

Statistical analyses

No statistical analyses for this end point

Primary: AUC0-48

End point title	AUC0-48[2]

End point description:

End point type	Primary

End point timeframe:

Day 1 to 3

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: Only descriptive statistics were included for this PK parameter.

End point values	Pharmacokinetic Analysis Population			
Subject group type	Subject analysis set			
Number of subjects analysed	7			
Units: h*ng/mL				
arithmetic mean (standard deviation)	63.4 (± 17.4)			

Statistical analyses

No statistical analyses for this end point

Primary: AUCinf

End point title	AUCinf[3]

End point description:

End point type	Primary

End point timeframe:

Day 1 to 3

Notes:

[3] - 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: Only descriptive statistics were included for this PK parameter.

End point values	Pharmacokinetic Analysis Population			
Subject group type	Subject analysis set			
Number of subjects analysed	7			
Units: h*ng/mL				
arithmetic mean (standard deviation)	72.5 (± 23.7)			

Statistical analyses

No statistical analyses for this end point

Adverse events

Adverse events information	
Timeframe for reporting adverse events: from Baseline to the End of the trial	
Assessment type	Systematic
Dictionary used	
Dictionary name	MedDRA
Dictionary version	24.1
Reporting groups	
Reporting group title	Difelikefalin

Reporting group description: -

Serious adverse events	Difelikefalin		
Total subjects affected by serious adverse events			
subjects affected / exposed	0 / 8 (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	Difelikefalin		
Total subjects affected by non-serious adverse events			
subjects affected / exposed	1 / 8 (12.50%)		
Nervous system disorders			
Dizziness			
subjects affected / exposed	1 / 8 (12.50%)		
occurrences (all)	1		
Headache			
subjects affected / exposed	1 / 8 (12.50%)		
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

None reported