Clinical trial results:
A prospective randomized pilot trial on safety and feasibility of Argatroban as anticoagulant in patients with extracorporeal membrane oxygenation (ECMO)

Summary

EudraCT number	2021-001456-34
Trial protocol	AT
Global end of trial date	07 July 2024

Results information

Result version number	v1 (current)
This version publication date	25 September 2024
First version publication date	25 September 2024

Trial information

Trial identification

Sponsor protocol code	ArgatrobanECMO_1.2

Additional study identifiers

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

Notes:

Sponsors

Sponsor organisation name	Medical University of Vienna
Sponsor organisation address	Währinger Gürtel 18-20, Vienna, Austria, 1090
Public contact	Department of Medicine I, ICU 13i2, Medical University of Vienna, +43 14040044570,
Scientific contact	Department of Medicine I, ICU 13i2, Medical University of Vienna, +43 14040044570,

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	06 August 2024
Is this the analysis of the primary completion data?	Yes
Primary completion date	07 July 2024
Global end of trial reached?	Yes
Global end of trial date	07 July 2024
Was the trial ended prematurely?	No

Notes:

General information about the trial

Main objective of the trial:

- Safety of Argatroban as anticoagulant in ECMO

Protection of trial subjects:

Subjects may prematurely discontinue from the study at any time. Premature discontinuation from the study means that the subject did not undergo an end of study examination as planned per protocol.

Subjects must be withdrawn under the following circumstances:
- at their own request
- if the Investigator feels it would not be in the best interest of the subject to continue (e.g. severe bleeding, severe thrombosis, ongoing difficulties to reach target values, need for major surgery)
- if the subject violates conditions laid out in the consent form / information sheet or disregards instructions by the study personal
- Switch to argatroban:
- confirmed HIT (following 4Ts score and PF4-antibody testing)

Background therapy: -

Evidence for comparator: -

Actual start date of recruitment	31 May 2021
Long term follow-up planned	No
Independent data monitoring committee (IDMC) involvement?	Yes

Notes:

Population of trial subjects

Subjects enrolled per country

Country: Number of subjects enrolled	Austria: 40
Worldwide total number of subjects	40
EEA total number of subjects	40

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)	27
From 65 to 84 years	13
85 years and over	0

Subject disposition

Recruitment

Recruitment details: -

Pre-assignment

Screening details: -

Pre-assignment period milestones

Number of subjects started	40
Number of subjects completed	40

Period 1

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

Arms

Are arms mutually exclusive?	Yes
Arm title	Argatroban

Arm description: -

Arm type	Experimental
Investigational medicinal product name	Argatroban
Investigational medicinal product code	
Other name	
Pharmaceutical forms	Anticoagulant and preservative solution for blood
Routes of administration	Intravenous use

Dosage and administration details:

Starting dose: 0.2µg/kg/min, titration according to target range

Arm title	Unfractionated Heparin

Arm description: -

Arm type	Active comparator
Investigational medicinal product name	Unfractionated Heparin
Investigational medicinal product code	
Other name	
Pharmaceutical forms	Anticoagulant and preservative solution for blood
Routes of administration	Intravenous use

Dosage and administration details:

According to anticoagulation target

Number of subjects in period 1	Argatroban	Unfractionated Heparin
Started	20	20
Completed	20	20

Baseline characteristics

Reporting groups

Reporting group title	Baseline

Reporting group description: -

Reporting group values	Baseline	Total	
Number of subjects	40	40	
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)	0	0	
Adults (18-64 years)	27	27	
From 65-84 years	13	13	
85 years and over	0	0	
Age continuous Units: years			
median	59		
inter-quartile range (Q1-Q3)	51 to 66	-	
Gender categorical Units: Subjects			
Female	7	7	
Male	33	33	

Subject analysis sets

Subject analysis set title	Full analysis
Subject analysis set type	Full analysis

Subject analysis set description:
Baseline Data

Reporting group values	Full analysis		
Number of subjects	40		
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)	0		
Adults (18-64 years)	27		

From 65-84 years	13		
85 years and over	0		

Age continuous Units: years			
median	59		
inter-quartile range (Q1-Q3)	51 to 66		
Gender categorical Units: Subjects			
Female	7		
Male	33		

End points

End points reporting groups	
Reporting group title	Argatroban
Reporting group description: -	
Reporting group title	Unfractionated Heparin
Reporting group description: -	
Subject analysis set title	Full analysis
Subject analysis set type	Full analysis
Subject analysis set description: Baseline Data	

Primary: Safety and Efficacy	
End point title	Safety and Efficacy
End point description: Combined endpoint of clinically relevant bleeding or thromboembolism	
End point type	Primary
End point timeframe: Inclusion until End of Study	

End point values	Argatroban	Unfractionated Heparin	Full analysis	
Subject group type	Reporting group	Reporting group	Subject analysis set	
Number of subjects analysed	20	20	40	
Units: % of patients	30	25	28	

Statistical analyses

Statistical analysis title	Pearson’s Chi-squared test
Comparison groups	Argatroban v Unfractionated Heparin
Number of subjects included in analysis	40
Analysis specification	Pre-specified
Analysis type	superiority
P-value	= 0.7
Method	Chi-squared

Adverse events

Adverse events information[1]

Timeframe for reporting adverse events:

Inclusion until End of Study

Assessment type	Systematic

Dictionary used

Dictionary name	MedDRA
Dictionary version	24.1

Reporting groups

Reporting group title	unexpected adverse events

Reporting group description: -

Serious adverse events	unexpected adverse events		
Total subjects affected by serious adverse events			
subjects affected / exposed	0 / 40 (0.00%)		
number of deaths (all causes)	6		
number of deaths resulting from adverse events			

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

Non-serious adverse events	unexpected adverse events		
Total subjects affected by non-serious adverse events			
subjects affected / exposed	0 / 40 (0.00%)		

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: No unexpected serious or non-serious adverse events were observed during the study

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