



Clinical trial results:

Use of a respiratory multiplex PCR and procalcitonin to reduce antibiotic exposure in patients with severe confirmed COVID-19 pneumonia : a multicenter, parallel-group, open-label, randomized controlled trial

Summary

EudraCT number	2020-001324-33
Trial protocol	FR
Global end of trial date	14 April 2021

Results information

Result version number	v1 (current)
This version publication date	26 June 2022
First version publication date	26 June 2022

Trial information

Trial identification

Sponsor protocol code	APHP200392
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Additional study identifiers

ISRCTN number	-
ClinicalTrials.gov id (NCT number)	NCT04334850
WHO universal trial number (UTN)	-

Notes:

Sponsors

Sponsor organisation name	ASSISTANCE PUBLIQUE - HOPITAUX DE PARIS
Sponsor organisation address	4 Avenue Victoria, Paris, France, 75004
Public contact	Hôpital Tenon, AP-HP, ASSISTANCE PUBLIQUE - HOPITAUX DE PARIS, +33 1 56 01 65 74, muriel.fartoukh@aphp.fr
Scientific contact	Hôpital Tenon, AP-HP, ASSISTANCE PUBLIQUE - HOPITAUX DE PARIS, +33 1 56 01 65 74, muriel.fartoukh@aphp.fr

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	14 January 2022
Is this the analysis of the primary completion data?	Yes
Primary completion date	14 April 2021
Global end of trial reached?	Yes
Global end of trial date	14 April 2021
Was the trial ended prematurely?	No

Notes:

General information about the trial

Main objective of the trial:

To assess the efficacy of a management strategy combining a broad panel respiratory mPCR and an algorithm of early antibiotic de-escalation and discontinuation based on both the mPCR results and the procalcitonin, on antibiotics exposure, as compared with a conventional strategy, in severe confirmed COVID-19 pneumonia.

Protection of trial subjects:

Patients benefit from specific medical monitoring.

AP-HP has taken all measures to conduct this research in accordance with the provisions of the Public Health Code applicable to research involving humans.

Background therapy: -

Evidence for comparator: -

Actual start date of recruitment	20 April 2020
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	France: 194
Worldwide total number of subjects	194
EEA total number of subjects	194

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)	83
From 65 to 84 years	109
85 years and over	2

Subject disposition

Recruitment

Recruitment details:

Participants to be recruited among adults with COVID-19 pneumonia admitted to the IC.

Pre-assignment

Screening details:

Participants to be recruited among adults with COVID-19 pneumonia admitted to the IC, the screening is done according to the recruiting criterias.

Period 1

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

Blinding implementation details:

NA

Arms

Are arms mutually exclusive?	Yes
Arm title	Conventional strategy

Arm description:

Conventional strategy, in severe confirmed COVID-19 pneumonia.

Arm type	Control arm
Investigational medicinal product name	antibiotics
Investigational medicinal product code	
Other name	
Pharmaceutical forms	Solution for solution for injection, Cachet
Routes of administration	Buccal use, Intravenous use

Dosage and administration details:

Conventional dosage

Arm title	mPCR FA-PPP and PCT
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Arm description:

A strategy combining a mPCR FA-PPP and an algorithm of early antibiotics adaptation and discontinuation based on both the mPCR FA-PPP results and the PCT.

Arm type	Experimental
Investigational medicinal product name	antibiotics
Investigational medicinal product code	
Other name	
Pharmaceutical forms	Cachet, Solution for injection/infusion
Routes of administration	Buccal use, Intracavernous use

Dosage and administration details:

Adminisatration via intravenous or bucal.

Dosage will be patient dependant.

Number of subjects in period 1	Conventional strategy	mPCR FA-PPP and PCT
Started	98	96
Completed	98	96

Baseline characteristics

Reporting groups

Reporting group title	Conventional strategy
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Reporting group description:

Conventional strategy, in severe confirmed COVID-19 pneumonia.

Reporting group title	mPCR FA-PPP and PCT
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Reporting group description:

A strategy combining a mPCR FA-PPP and an algorithm of early antibiotics adaptation and discontinuation based on both the mPCR FA-PPP results and the PCT.

Reporting group values	Conventional strategy	mPCR FA-PPP and PCT	Total
Number of subjects	98	96	194
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)			0
From 65-84 years			0
85 years and over			0
Age continuous			
Units: years			
arithmetic mean	63.8	64.9	
standard deviation	± 13.8	± 12	-
Gender categorical			
Units: Subjects			
Female	27	30	57
Male	71	66	137

End points

End points reporting groups

Reporting group title	Conventional strategy
Reporting group description: Conventional strategy, in severe confirmed COVID-19 pneumonia.	
Reporting group title	mPCR FA-PPP and PCT
Reporting group description: A strategy combining a mPCR FA-PPP and an algorithm of early antibiotics adaptation and discontinuation based on both the mPCR FA-PPP results and the PCT.	
Subject analysis set title	Primary : Number of antibiotic free days at D28
Subject analysis set type	Intention-to-treat
Subject analysis set description: The primary assessment criterion is the number of antibiotic free days at D28, which corresponds to the number of days alive without any antibiotics at Day 28. The D28 time point is usual in studies assessing antibiotic use in ICU patients.	

Primary: Primary : Number of antibiotic free days at D28

End point title	Primary : Number of antibiotic free days at D28
End point description: The primary assessment criterion is the number of antibiotic free days at D28, which corresponds to the number of days alive without any antibiotics at Day 28. The D28 time point is usual in studies assessing antibiotic use in ICU patients.	
End point type	Primary
End point timeframe: 3 months	

End point values	Conventional strategy	mPCR FA-PPP and PCT		
Subject group type	Reporting group	Reporting group		
Number of subjects analysed	98	93		
Units: days	14	12		

Statistical analyses

Statistical analysis title	Primary : Number of antibiotic free days at D28
Comparison groups	Conventional strategy v mPCR FA-PPP and PCT
Number of subjects included in analysis	191
Analysis specification	Pre-specified
Analysis type	equivalence
P-value	= 0.895
Method	negative binomial distributions

Adverse events

Adverse events information^[1]

Timeframe for reporting adverse events:

3 months

Assessment type	Systematic
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Dictionary used

Dictionary name	MedDRA
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Dictionary version	24
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Frequency threshold for reporting non-serious adverse events: 0 %

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: Unfortunately AE list with SOC are not available yet.

More information

Substantial protocol amendments (globally)

Were there any global substantial amendments to the protocol? Yes

Date	Amendment
01 September 2020	- Prolongation de la durée des inclusions de 6 mois, afin de pouvoir compléter les objectifs d'inclusion en cas de deuxième vague de l'épidémie ; - Changement d'Investigateurs dans deux centres participant.
06 April 2021	- Changement d'Investigateurs dans deux centres participant.

Notes:

Interruptions (globally)

Were there any global interruptions to the trial? No

Limitations and caveats

None reported