Clinical trial results:
Pharmacokinetics of intravenous, rectal, intravesical, vaginal, and transdermal administration of exogenous melatonin in healthy female volunteers: a crossover study

Summary

EudraCT number	2017-000997-13
Trial protocol	DK
Global end of trial date	01 February 2021

Results information

Result version number	v1 (current)
This version publication date	17 February 2021
First version publication date	17 February 2021
Summary attachment (see zip file)	Summary attachment (Report.pdf)

Trial information

Trial identification

Sponsor protocol code	HEHDZ01

Additional study identifiers

ISRCTN number	-
ClinicalTrials.gov id (NCT number)	NCT03519750
WHO universal trial number (UTN)	-

Notes:

Sponsors

Sponsor organisation name	Center for Perioperative Optimization, Department of Surgery
Sponsor organisation address	Borgmester Ib Juuls Vej 1, Herlev, Denmark, 2730
Public contact	Dennis Zetner, Center for Perioperative Optimization, Gastroenheden D, Herlev Hospital, dennis.zetner@gmail.com
Scientific contact	Dennis Zetner, Center for Perioperative Optimization, Gastroenheden D, Herlev Hospital, dennis.zetner@gmail.com

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	18 June 2020
Is this the analysis of the primary completion data?	Yes
Primary completion date	20 May 2020
Global end of trial reached?	Yes
Global end of trial date	01 February 2021
Was the trial ended prematurely?	No

Notes:

General information about the trial

Main objective of the trial:

The aim of the study is to determine the pharmacokinetic properties, and possible adverse reactions of melatonin when administered rectally, intravesically, vaginally, transdermally and intravenously, in healthy female volunteers.

Protection of trial subjects:

None

Background therapy: -

Evidence for comparator: -

Actual start date of recruitment	01 January 2018
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	Denmark: 10
Worldwide total number of subjects	10
EEA total number of subjects	10

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)	10
From 65 to 84 years	0
85 years and over	0

Subject disposition

Recruitment

Recruitment details:

Participants were recruited by an ad for medical students of the University of Copenhagen. All 10 participants were recruited in November/December 2018.

Pre-assignment

Screening details:

After contacting the primary investigator, possible participants showed up at the hospital. All participants were screened for eligibility criteria. All 10 volunteers were deemed eligible by the primary investigator.

Pre-assignment period milestones

Number of subjects started	10
Number of subjects completed	10

Period 1

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

Arms

Arm title	Arm 1

Arm description:

Intravenous administration

Arm type	Experimental
Investigational medicinal product name	Intravenous Melatonin
Investigational medicinal product code	PR1
Other name	
Pharmaceutical forms	Concentrate and solvent for concentrate for solution for infusion
Routes of administration	Intravenous use

Dosage and administration details:

25 mg

Investigational medicinal product name	Intravesical Melatonin
Investigational medicinal product code	PR2
Other name	
Pharmaceutical forms	Intravesical suspension
Routes of administration	Intravesical use

Dosage and administration details:

25 mg

Investigational medicinal product name	Vaginal Melatonin
Investigational medicinal product code	PR3
Other name	
Pharmaceutical forms	Vaginal capsule, soft
Routes of administration	Vaginal use

Dosage and administration details:

25 mg

Investigational medicinal product name	Rectal melatonin
Investigational medicinal product code	PR4
Other name	
Pharmaceutical forms	Rectal emulsion
Routes of administration	Rectal use

Dosage and administration details:
25 mg

Investigational medicinal product name	Transdermal melatonin
Investigational medicinal product code	PR5
Other name	
Pharmaceutical forms	Cream
Routes of administration	Cutaneous use

Dosage and administration details:
25 mg/g, 1 g applied

Number of subjects in period 1	Arm 1
Started	10
Completed	10

Baseline characteristics

Reporting groups

Reporting group title	Overall trial

Reporting group description: -

Reporting group values	Overall trial	Total	
Number of subjects	10	10	
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			
median	23		
full range (min-max)	22 to 27	-	
Gender categorical Units: Subjects			
Female	10	10	
Male	0	0	
Ethnicity Units: Subjects			
Caucasian	9	9	
Asian	1	1	
Height Units: cm			
median	172		
full range (min-max)	163 to 184	-	
Weight Units: kg			
median	64		
full range (min-max)	54 to 71	-	
BMI Units: kg/m2			
median	21.1		
full range (min-max)	18.7 to 23.1	-	

End points

End points reporting groups

Reporting group title	Arm 1
Reporting group description: Intravenous administration	

Primary: Pharmacokinetic Properties

End point title	Pharmacokinetic Properties[1]
End point description:	
End point type	Primary
End point timeframe: Over 48 hours.	

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: No statistical tests have been performed, only pharmacokinetic calculations. I am unable to enter these, as I have not calculated any p-values.

End point values	Arm 1			
Subject group type	Reporting group			
Number of subjects analysed	10			
Units: variable				
number (not applicable)	10			

Attachments (see zip file)	Table 3.docx

Statistical analyses

No statistical analyses for this end point

Secondary: SRT and KSS

End point title	SRT and KSS
End point description:	
End point type	Secondary
End point timeframe: 48 hours	

End point values	Arm 1			
Subject group type	Reporting group			
Number of subjects analysed	10			
Units: variable				
number (not applicable)	10			

Attachments (see zip file)	Table 4.docx

Statistical analyses

No statistical analyses for this end point

Secondary: Adverse reactions

End point title	Adverse reactions

End point description:

End point type	Secondary

End point timeframe:

24-48 hours after administration.

End point values	Arm 1			
Subject group type	Reporting group			
Number of subjects analysed	10			
Units: n	10			

Attachments (see zip file)	Table 5.docx

Statistical analyses

No statistical analyses for this end point

Adverse events

Adverse events information[1]	
Timeframe for reporting adverse events: 24-48 hours after administration of melatonin	
Assessment type	Non-systematic

Dictionary used	
Dictionary name	MedDRA
Dictionary version	23

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: These are reported under secondary outcomes.

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

Online references

http://www.ncbi.nlm.nih.gov/pubmed/32937627