Clinical trial results:
Intraperitoneal atomization of levobupivacaine during gynecological laparoscopic procedures : Impact on pain, opioid use and length of recovery room stay (IPLA).

Summary

EudraCT number	2013-000384-87
Trial protocol	BE
Global end of trial date	13 June 2014

Results information

Result version number	v1 (current)
This version publication date	21 August 2021
First version publication date	21 August 2021

Trial information

Trial identification

Sponsor protocol code	AGO/2013/001

Additional study identifiers

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

Notes:

Sponsors

Sponsor organisation name	Ghent University Hospital
Sponsor organisation address	Corneel Heymanslaan 10, Ghent, Belgium, 9000
Public contact	Hiruz CTU, Ghent University Hospital, +32 93320500, hiruz.ctu@uzgent.be
Scientific contact	Hiruz CTU, Ghent University Hospital, +32 93320500, hiruz.ctu@uzgent.be

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	03 December 2018
Is this the analysis of the primary completion data?	Yes
Primary completion date	13 June 2014
Global end of trial reached?	Yes
Global end of trial date	13 June 2014
Was the trial ended prematurely?	No

Notes:

General information about the trial

Main objective of the trial:

The primary goal is to assess the efficacy of intraperitoneal atomization of levobupivacaine in reducing postoperative pain in patients undergoing gynecological laparoscopic procedures in one-day surgery.

Protection of trial subjects:

Ethics review and approval, informed consent, supportive care and routine monitoring.

Background therapy: -

Evidence for comparator: -

Actual start date of recruitment	01 March 2013
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	Belgium: 16
Worldwide total number of subjects	16
EEA total number of subjects	16

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)	16
From 65 to 84 years	0
85 years and over	0

Subject disposition

Recruitment

Recruitment details:

27 patients were screened in the period from 01-03-2013 till 13-06-2014. X patients were included, 16 patients were randomised. 16 patients were included and completed the trial. End of trial notification was dated 13-06-2014 (last patient last visit) and submitted to EC and CA 3-12-2018.

Pre-assignment

Screening details:

Inclusion criteria: Patients who are planned for gynecological laparoscopic interventions on an ambulatory basis.
Exclusion Criteria:
Less than 18 year old.
Weight < 50 kg and > 80 kg.
Pregnant.
Prisoners
Allergic to topical anesthetics (Amides) and Opioids
Currently/within the last 30 days prescribed an opiate
Chronic pain syndrome

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:

Randomization was done using a computer generated randomization list. The person who will analyse the data, and the nurses who will register the outcomes will be blinded from group allocation.

Arms

Are arms mutually exclusive?	Yes
Arm title	Infiltration of portal sites with 0,5% levobupivacaine.

Arm description: -

Arm type	Active comparator
Investigational medicinal product name	Chirocaine
Investigational medicinal product code	
Other name	levobupivacaine 0.5%
Pharmaceutical forms	Solution for injection/infusion
Routes of administration	Infiltration, Intraperitoneal use

Dosage and administration details:

0.1 ml/kg of levobupivacaine for local injection of the portal sites

Arm title	Additional injection of 0.5% levobupivacaine via a trocar

Arm description: -

Arm type	Experimental
Investigational medicinal product name	Chirocaine
Investigational medicinal product code	
Other name	levobupivacaine 0.5%
Pharmaceutical forms	Solution for injection/infusion
Routes of administration	Infiltration, Intraperitoneal use

Dosage and administration details:

0.1 ml/kg of levobupivacaine for local injection of the portal sites
0.15 ml/kg of levobupivacaine will be injected in peritoneal cavity via a trocar at the beginning of the surgery
0.15 ml/kg of levobupivacaine will be injected in peritoneal cavity via a trocar again, at the end of the surgery

Arm title	Additional intraperitoneal atomization of levobupivacaine.
Arm description: -	
Arm type	Experimental
Investigational medicinal product name	Chirocaine
Investigational medicinal product code	
Other name	levobupivacaine 0.5%
Pharmaceutical forms	Solution for injection/infusion
Routes of administration	Intraperitoneal use, Infiltration

Dosage and administration details:

0.1 ml/kg of levobupivacaine for local injection of the portal sites
0.15 ml/kg following insuflation of the abdomen will be atomized onto each subdiaphragmatic area, onto the surgical dissection site and diffusely across the peritoneal surface (dome of the abdomen and surface of the visible bowel), using the OptiSpray® surgical spray device
0.15 ml/kg will be atomized again, at the end of the surgery onto the same areas, using the Optispray® surgical spray device

Number of subjects in period 1	Infiltration of portal sites with 0,5% levobupivacaine.	Additional injection of 0.5% levobupivacaine via a trocar	Additional intraperitoneal atomization of levobupivacaine.
Started	6	4	6
Completed	6	4	6

Baseline characteristics

Reporting groups	
Reporting group title	Infiltration of portal sites with 0,5% levobupivacaine.
Reporting group description: -	
Reporting group title	Additional injection of 0.5% levobupivacaine via a trocar
Reporting group description: -	
Reporting group title	Additional intraperitoneal atomization of levobupivacaine.
Reporting group description: -	

Reporting group values	Infiltration of portal sites with 0,5% levobupivacaine.	Additional injection of 0.5% levobupivacaine via a trocar	Additional intraperitoneal atomization of levobupivacaine.
Number of subjects	6	4	6
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)	6	4	6
From 65-84 years	0	0	0
85 years and over	0	0	0
Gender categorical Units: Subjects			
Female	6	4	6
Male	0	0	0

Reporting group values	Total		
Number of subjects	16		
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)	16		
From 65-84 years	0		
85 years and over	0		
Gender categorical Units: Subjects			
Female	16		

Male	0		

End points

End points reporting groups

Reporting group title	Infiltration of portal sites with 0,5% levobupivacaine.
Reporting group description: -	
Reporting group title	Additional injection of 0.5% levobupivacaine via a trocar
Reporting group description: -	
Reporting group title	Additional intraperitoneal atomization of levobupivacaine.
Reporting group description: -	

Primary: Post-operative pain intensity during the postoperative stay in the ambulatory surgery unit

End point title	Post-operative pain intensity during the postoperative stay in the ambulatory surgery unit[1]
End point description:	
There were no results, since no analysis was performed due to limited data.	
End point type	Primary
End point timeframe:	
Participants will be followed for the duration of hospital stay, an expected average of 1 day.	

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 analysis available.

End point values	Infiltration of portal sites with 0,5% levobupivacaine.	Additional injection of 0.5% levobupivacaine via a trocar	Additional intraperitoneal atomization of levobupivacaine.	
Subject group type	Reporting group	Reporting group	Reporting group	
Number of subjects analysed	6	4	6	
Units: numeric rating scale (0 - 10)	0	0	0	

Statistical analyses

No statistical analyses for this end point

Primary: Post-operative shoulder pain after laparoscopic gynecological procedure in 1-day hospital setting.

End point title	Post-operative shoulder pain after laparoscopic gynecological procedure in 1-day hospital setting.[2]
End point description:	
There were no results, since no analysis was performed due to limited data.	
End point type	Primary
End point timeframe:	
Participants will be followed for the duration of hospital stay, an expected average of 1 day.	

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: No statistical analysis available.

End point values	Infiltration of portal sites with 0,5% levobupivacaine.	Additional injection of 0.5% levobupivacaine via a trocar	Additional intraperitoneal atomization of levobupivacaine.	
Subject group type	Reporting group	Reporting group	Reporting group	
Number of subjects analysed	6	4	6	
Units: numeric rating scale (0 - 10	0	0	0	

Statistical analyses

No statistical analyses for this end point

Secondary: Post-operative opioid analgesic requirements after laparoscopic gynaecological surgery.

End point title	Post-operative opioid analgesic requirements after laparoscopic gynaecological surgery.

End point description:

There were no results, since no analysis was performed due to limited data.

End point type	Secondary

End point timeframe:

Participants will be followed for the duration of hospital stay, an expected average of 1 day.

End point values	Infiltration of portal sites with 0,5% levobupivacaine.	Additional injection of 0.5% levobupivacaine via a trocar	Additional intraperitoneal atomization of levobupivacaine.	
Subject group type	Reporting group	Reporting group	Reporting group	
Number of subjects analysed	6	4	6	
Units: Piritramide 0,05 mg/kg				
number (not applicable)	0	0	0	

Statistical analyses

No statistical analyses for this end point

Secondary: Post-operative pain intensity after laparoscopic gynaecological surgery from hospital discharge until 24 hrs post-operatively.

End point title	Post-operative pain intensity after laparoscopic gynaecological surgery from hospital discharge until 24 hrs post-operatively.

End point description:

There were no results, since no analysis was performed due to limited data.

End point type	Secondary

End point timeframe:

Patients will be followed until 24 hours post-operatively.

End point values	Infiltration of portal sites with 0,5% levobupivacaine.	Additional injection of 0.5% levobupivacaine via a trocar	Additional intraperitoneal atomization of levobupivacaine.	
Subject group type	Reporting group	Reporting group	Reporting group	
Number of subjects analysed	6	4	6	
Units: numeric rating scale (0-10)	0	0	0	

Statistical analyses

No statistical analyses for this end point

Secondary: Post-operative nausea and vomiting (PONV) in the first 24 hrs post-operatively, after laparoscopic gynecological surgery.

End point title	Post-operative nausea and vomiting (PONV) in the first 24 hrs post-operatively, after laparoscopic gynecological surgery.

End point description:

There were no results, since no analysis was performed due to limited data.

End point type	Secondary

End point timeframe:

Patients will be followed until 24 hours post-operatively.

End point values	Infiltration of portal sites with 0,5% levobupivacaine.	Additional injection of 0.5% levobupivacaine via a trocar	Additional intraperitoneal atomization of levobupivacaine.	
Subject group type	Reporting group	Reporting group	Reporting group	
Number of subjects analysed	6	4	6	
Units: numeric rating scale (0-10)	0	0	0	

Statistical analyses

No statistical analyses for this end point

Secondary: Time until discharge from hospital.

End point title	Time until discharge from hospital.

End point description:

Discharge criterion : modified aldrete ≥ 12/14.

There were no results, since no analysis was performed due to limited data.

End point type	Secondary

End point timeframe:

Patients will be followed until an estimated 24 hours post-operatively.

End point values	Infiltration of portal sites with 0,5% levobupivacaine.	Additional injection of 0.5% levobupivacaine via a trocar	Additional intraperitoneal atomization of levobupivacaine.	
Subject group type	Reporting group	Reporting group	Reporting group	
Number of subjects analysed	6	4	6	
Units: time				
number (not applicable)	0	0	0	

Statistical analyses

No statistical analyses for this end point

Secondary: Time until discharge from recovery room

End point title	Time until discharge from recovery room

End point description:

There were no results, since no analysis was performed due to limited data.

End point type	Secondary

End point timeframe:

Up until discharge from recovery room post-operatively, probably a few hours.

End point values	Infiltration of portal sites with 0,5% levobupivacaine.	Additional injection of 0.5% levobupivacaine via a trocar	Additional intraperitoneal atomization of levobupivacaine.	
Subject group type	Reporting group	Reporting group	Reporting group	
Number of subjects analysed	6	4	6	
Units: time				
number (not applicable)	0	0	0	

Statistical analyses

No statistical analyses for this end point

Secondary: Post-operative sedation until hospital discharge, after laparoscopic gynecological surgery.

End point title	Post-operative sedation until hospital discharge, after laparoscopic gynecological surgery.

End point description:

There were no results, since no analysis was performed due to limited data.

End point type	Secondary

End point timeframe:

Patients will be followed up to 6 hrs post-operatively.

End point values	Infiltration of portal sites with 0,5% levobupivacaine.	Additional injection of 0.5% levobupivacaine via a trocar	Additional intraperitoneal atomization of levobupivacaine.	
Subject group type	Reporting group	Reporting group	Reporting group	
Number of subjects analysed	6	4	6	
Units: Ramsay sedation score (1-6)	0	0	0	

Statistical analyses

No statistical analyses for this end point

Adverse events

Adverse events information[1]	
Timeframe for reporting adverse events:	
Overall study	
Assessment type	Non-systematic

Dictionary used	
Dictionary name	MedDRA
Dictionary version	14.1

Reporting groups	
Reporting group title	Infiltration of portal sites with 0,5% levobupivacaine.
Reporting group description: -	
Reporting group title	Additional injection of 0.5% levobupivacaine via a trocar
Reporting group description: -	
Reporting group title	Additional intraperitoneal atomization of levobupivacaine.
Reporting group description: -	

Serious adverse events	Infiltration of portal sites with 0,5% levobupivacaine.	Additional injection of 0.5% levobupivacaine via a trocar	Additional intraperitoneal atomization of levobupivacaine.
Total subjects affected by serious adverse events			
subjects affected / exposed	0 / 6 (0.00%)	0 / 4 (0.00%)	0 / 6 (0.00%)
number of deaths (all causes)	0	0	0
number of deaths resulting from adverse events		0	0

Frequency threshold for reporting non-serious adverse events: 0 %

Non-serious adverse events	Infiltration of portal sites with 0,5% levobupivacaine.	Additional injection of 0.5% levobupivacaine via a trocar	Additional intraperitoneal atomization of levobupivacaine.
Total subjects affected by non-serious adverse events			
subjects affected / exposed	0 / 6 (0.00%)	0 / 4 (0.00%)	0 / 6 (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 non-serious adverse events were recorded for the participating patients.

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

Limitations of the trial such as small numbers of subjects analysed or technical problems leading to unreliable data.

Due to a surgeons decision to stop performing laparascopic gynecological surgery in daycare, we were left without study patients. There were no results, since no analysis was performed due to limited data.

Notes: