



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 insufflation 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: Pir tramide 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 \geq 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 laparoscopic gynecological surgery in daycare, we were left without study patients. There were no results, since no analysis was performed due to limited data. |
|---|

Notes: