

The use of local anaesthetic in laparoscopic inguinal hernia repair: a randomised clinical trial

Submission date 06/12/2012	Recruitment status No longer recruiting	<input type="checkbox"/> Prospectively registered <input type="checkbox"/> Protocol
Registration date 28/02/2013	Overall study status Completed	<input type="checkbox"/> Statistical analysis plan <input type="checkbox"/> Results
Last Edited 22/06/2016	Condition category Signs and Symptoms	<input type="checkbox"/> Individual participant data <input type="checkbox"/> Record updated in last year

Plain English summary of protocol

Background and study aims:

Inguinal hernias result from protrusion of abdominal contents through the inguinal canal in the groin region and are common. Surgery to repair inguinal hernias is one of the most common operations performed in the UK. The surgery can be done by an open traditional method, which involves repairing the hernia through an incision (cut) in the groin, or through a keyhole method (laparoscopic repair). One advantage of keyhole surgery is that it is generally associated with less pain following surgery, although many patients still experience significant pain. This study is looking only at the keyhole method and is trying to establish if there is any additional benefit of administering local anaesthetic in a specific fashion to the internal lining of the abdomen (the peritoneum). All patients will receive local anaesthetic to the port sites (where the keyhole instruments are inserted), the only variable will be whether additional local anaesthetic is given to the lining of the abdomen. The aim of our study is to establish if there is a benefit of instilling local anaesthetic to the peritoneum during laparoscopic inguinal hernia surgery. Although some surgeons perform this routinely, previous studies have not shown a clear benefit of the technique.

Who can participate?

Any adult patients undergoing elective groin hernia surgery; both principal types of laparoscopic repair will be included [i.e. totally extra-peritoneal (TEP) and trans abdominal preperitoneal (TAPP) repairs].

What does the study involve?

The patients recruited into the study will have the same operation as another patient who is not recruited undergoing the same procedure. The difference will be at the end of the operation, when they will receive either a type of local anaesthetic or a harmless salt solution (50ml). Whether they receive the local anaesthetic or salty solution will be determined at random prior to the procedure. Patients will be asked to rate the severity of their pain following their operation. They will be contacted at 4-6 weeks following the operation and again at one year. We hope to recruit 160 patients in total.

What are the possible benefits and risks of participating?

The study may show a benefit of giving local anaesthetic differently and as such help patients

undergoing the same procedure in the future.

There is a risk of side effects of local anaesthetics when they are given in high doses but we will not exceed the maximum recommended dose based on patients body weight. There is a theoretical risk of causing a temporary anaesthesia to one of the main nerves (the femoral nerve) that pass through the groin region into the thigh; if this did occur it could potentially delay the discharge of the patient. Patients will be contacted at approximately 1 month and 1 year following their surgery they may find this useful to provide feedback or discuss any concerns that they may have, as follow-up is not routine following this type of surgery.

Where is the study run from?

The study centre will be in Ysbyty Gwynedd, which is a district general hospital in North Wales, UK. Only patients operated on within the hospital will be recruited into the trial.

When is the study starting and how long is it expected to last for?

It is anticipated to start recruiting for the study in early 2013 and recruitment will hopefully be complete by mid-2014. The study will be complete one year following recruitment of the final participant.

Who is funding the study?

Betsi Cadwaladr University Health Board

Who is the main contact?

Mr Stephen Sammut, stephen.sammut@wales.nhs.uk

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Contact information

Type(s)

Scientific

Contact name

Mr Stephen Sammut

Contact details

Department of General Surgery

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LL57 2PW

Additional identifiers

Protocol serial number

1.2

Study information

Scientific Title

A single-blind randomised trial to assess whether the application of local anaesthetic versus placebo to the peritoneum during laparoscopic inguinal hernia surgery alters the post-operative pain intensity or analgesic requirements in adults

Acronym

LALA

Study objectives

There is no difference in either pain intensity or analgesic requirements following surgery in patients who undergo laparoscopic repair of an inguinal hernia when additional local anaesthetic is applied to the peritoneum.

Ethics approval required

Old ethics approval format

Ethics approval(s)

North Wales Research Ethics Committee - West, 23/07/2012, ref: 12/WA/0227

Study design

Single-blind randomised controlled trial

Primary study design

Interventional

Study type(s)

Treatment

Health condition(s) or problem(s) studied

Post operative pain following laparoscopic inguinal hernia surgery

Interventions

Levobupivacaine (0.25%) will be compared to placebo (0.9% sodium chloride). A total of 50ml of study solution will be administered to the peritoneum; the proportion of levobupivacaine administered will depend on the patients body weight. All patients will receive 10ml of 0.25% levobupivacaine to the port sites.

Intervention Type

Other

Phase

Not Applicable

Primary outcome(s)

1. Perceived pain on movement or coughing measured on a VAS scale at one, two and four hours post surgery
2. Total dosage of Fentanyl administered in post-operative period

Key secondary outcome(s))

1. Perceived pain intensity on movement or coughing at other time points during the first post-operative week (measured at 8 hours, 24 hours and then daily)

2. Use of rescue or break-through medication for pain during the first week post-operatively. (All patients will be given a prescription of paracetamol to take regularly, any pain medication used over-and-above this will be classed as rescue medication.)
3. Time to discharge criteria being met

Completion date

07/02/2014

Eligibility

Key inclusion criteria

1. Age 18 years or older
2. Elective procedure
3. Suspected inguinal hernia
4. Ability to give informed consent
5. At least 24 hours between decision to operate and operation

Participant type(s)

Patient

Healthy volunteers allowed

No

Age group

Adult

Lower age limit

18 years

Sex

All

Key exclusion criteria

1. History of allergy or sensitivity to local anaesthetics
2. Treatment for chronic pain or long-term analgesic use
3. Conversion to an open repair or laparotomy during the procedure

Date of first enrolment

07/01/2013

Date of final enrolment

07/02/2014

Locations

Countries of recruitment

United Kingdom

Wales

Study participating centre
Department of General Surgery
Bangor
United Kingdom
LL57 2PW

Sponsor information

Organisation
National Health Service in Wales (UK)

ROR
<https://ror.org/04a496k07>

Funder(s)

Funder type
Government

Funder Name
Betsi Cadwaladr University Health Board (UK)

Results and Publications

Individual participant data (IPD) sharing plan

IPD sharing plan summary
Not provided at time of registration

Study outputs

Output type	Details	Date created	Date added	Peer reviewed?	Patient-facing?
Participant information sheet	Participant information sheet	11/11/2025	11/11/2025	No	Yes