

A comparison of psoas compartment and subarachnoid blocks for 'fast track' total hip arthroplasty

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		<input type="checkbox"/> Protocol
Registration date 28/09/2007	Overall study status Completed	<input type="checkbox"/> Statistical analysis plan
		<input type="checkbox"/> Results
Last Edited 01/09/2015	Condition category Surgery	<input type="checkbox"/> Individual participant data
		<input type="checkbox"/> Record updated in last year

Plain English summary of protocol

Not provided at time of registration

Contact information

Type(s)

Scientific

Contact name

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Additional identifiers

Protocol serial number

N0544183632

Study information

Scientific Title

A comparison of psoas compartment and subarachnoid blocks for 'fast track' total hip arthroplasty

Study objectives

The aim of our study is to compare the reduction in morphine consumption, length of hospital stay and quality of rehabilitation in patients managed with intravenous patient controlled analgesia (PCA) with morphine combined with a subarachnoid block versus PCA morphine combined with a psoas compartment block for total hip replacement.

Ethics approval required

Old ethics approval format

Ethics approval(s)

Not provided at time of registration

Study design

Randomised controlled trial

Primary study design

Interventional

Study type(s)

Treatment

Health condition(s) or problem(s) studied

Surgery: Total hip arthroplasty

Interventions

The aims of our study are to compare, in patients undergoing total hip replacement (THR) operation, the reduction in morphine consumption, length of hospital stay, side effects and quality of rehabilitation in patients managed with intravenous patient controlled analgesia (PCA) with morphine combined with a subarachnoid block versus PCA morphine combined with a psoas compartment block for total hip replacement.

Informed consent will be taken from all patients recruited to the study. General anaesthesia will be administered to all patients in the anaesthetic room.

Two groups of 25 patients each will be required to detect a significant difference in outcome. Patients in both groups will receive morphine intraoperatively (the dose being decided on basis of their weight) and PCA morphine postoperatively.

Patients in Group A will have a psoas compartment block while patients in Group B will have a subarachnoid block. Patients in both the groups will receive PCA morphine for post operative analgesia. All patients will also receive paracetamol and ibuprofen postoperatively if there are no contraindications to use of these medicines. To ensure validity and reproducibility of the study, it is important to ensure that every patient recruited for the study should have an equal chance of being assigned to either of the two groups. This is called randomisation and will be performed by a drawing of a card with a computer-generated number that will assign the patient to either of the two groups. The card will carry a number, which can be cross-referenced to the technique performed. Only this number will appear on the data collection sheet and will be used to identify the patient. The anaesthetist performing the block will not be involved in

further intra-operative management of the patient. The surgeons, physiotherapists and nursing staff collecting the data postoperatively will also be blinded to the patient's group.

In the postoperative period, data on morphine consumption as determined by use of the PCA pump will be collected. Pain scores will be recorded by a trained nurse. Hip and knee flexion, straight leg raise and mobility scores will be recorded by the attending physiotherapist. The number of days to discharge from the hospital will also be recorded. The collected data will be statistically analysed for differences between the two groups.

Traditional techniques for THR surgery are associated with significant post-operative pain, which, without adequate analgesia, lead to unnecessary morbidity, and a delay in recovery and subsequent discharge. Regional blockade has reduced the need for opioid analgesia and thereby reduces their potential side effects. Many studies have shown that a regional technique not only reduces opioid requirement but significantly improves a patient's outcome in terms of rehabilitation, analgesia, patient satisfaction and time to discharge. In addition, in hip surgery, regional blockade has been shown to reduce blood loss and thrombo-embolic events. Psoas compartment and subarachnoid blocks for total hip replacement operation have been evaluated in a few studies but there is lack of consensus on their efficacy in providing pain relief and reducing morphine consumption.

Total hip replacement has been performed for more than forty years with admirable success and is currently a very cost-effective procedure, which contributes significantly to a patient's quality of life. We propose to evaluate effect of psoas compartment and subarachnoid blocks in patients undergoing THR.

Intervention Type

Drug

Phase

Not Applicable

Drug/device/biological/vaccine name(s)

Morphine

Primary outcome(s)

Reduction in peri-operative morphine consumption

Key secondary outcome(s))

1. Early mobility
2. Early rehabilitation

Completion date

01/08/2007

Eligibility

Key inclusion criteria

1. All patients, between the ages of 18 and 85 years undergoing total hip replacement (THR) at the Addenbrooke's NHS Trust
2. ASA physical status I to III

Participant type(s)

Patient

Healthy volunteers allowed

No

Age group

Adult

Lower age limit

18 years

Upper age limit

85 years

Sex

All

Key exclusion criteria

1. ASA greater than III
2. Age below 18 and above 85 years old
3. Weight or BMI exclusion <50 or> 120 kg [BMI <20>35]
4. Inability to use a PCA (dementia, psychiatric problems, intellectual disability)
5. Contraindication to NSAIDs (asthmatics with significant sensitivity to aspirin, renal impairment, severe liver dysfunction, history of gastric ulceration or bleeding)
6. Opioid dependence or chronic pain syndromes
7. Contraindication to neuro-axial blockade or regional techniques - bleeding diathesis, anti-coagulation, absolute local anaesthetic (LA) allergy, localised infection, concurrent peripheral neuropathy or nerve injury

Date of first enrolment

01/08/2006

Date of final enrolment

01/08/2007

Locations**Countries of recruitment**

United Kingdom

England

Study participating centre

Addenbrooke's Hospital

Cambridge

United Kingdom

CB2 2QQ

Sponsor information

Organisation

Record Provided by the NHSTCT Register - 2007 Update - Department of Health

Funder(s)

Funder type

Government

Funder Name

Cambridge Consortium - Addenbrooke's (UK), Own Account NHS R&D Support Funding

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