# Are the sympathetic sensorimotor changes induced by thoracic epidural anaesthesia such that mobilization is possible?

Submission date 29/09/2006	<b>Recruitment status</b> No longer recruiting	Prospectively registered
		[_] Protocol
Registration date	Overall study status	[] Statistical analysis plan
29/09/2006	Completed	[_] Results
Last Edited 29/04/2015	<b>Condition category</b> Surgery	Individual participant data
		[] Record updated in last year

### Plain English summary of protocol

Not provided at time of registration

# Contact information

Type(s) Scientific

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### **Contact details**

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# Additional identifiers

EudraCT/CTIS number

**IRAS number** 

ClinicalTrials.gov number

Secondary identifying numbers N0054174157

# Study information

### Scientific Title

Are the sympathetic sensorimotor changes induced by thoracic epidural anaesthesia such that mobilization is possible?

### **Study objectives**

To determine if the degree of haemodynamic and sensorimotor changes caused by a thoracic epidural infusion can allow early mobilization in patients having thoracotomies and if an opiate only epidural facilitates early mobilization. To determine if patients having thoracic epidural analgesia for thoracotomies can be mobilized early in the post operative period. The effect of the thoracic epidural on blood pressure, sensation, strength, co ordination, vibration sense and proprioception (the ability to sense the position of a limb in space). Scientific Basis: Patients having thoracotomies usually receive thoracic epidural analgesia. A local anaesthetic and opiate drug are usually used in combination to provide pain relief. The presence of a thoracic epidural especially the local anaesthetic component has been thought to produce weakness of the limbs and sensory changes that prevent patients from being mobilized. However mobilization of these patients has many benefits in terms of their respiratory function and overall recovery. There has been no previous work to show that early mobilization is possible in the presence of a functioning epidural in our group of patients. We hope to demonstrate that using an opiate only epidural will make early mobilization a possibility.

### 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

Secondary study design Randomised controlled trial

**Study setting(s)** Hospital

**Study type(s)** Treatment

Participant information sheet

Health condition(s) or problem(s) studied Surgery: Thoracotomy

Interventions

A total of 80 patients who have been listed for elective thoracotomy for whom epidural analgesia has been agreed will be invited to participate in the study on the day before their operation. The epidural will be sited before the operation and following surgery the functioning of the epidural will be confirmed. A combination of local anaesthetic and opiate (morphine like drug) will be administered via the epidural and the patient sent to the ward to receive their routine postoperative care.

They will be visited at 24, 48 and 72 hours during the postoperative period. At the 24 hour visit the epidural solution will be changed, so that the patient receives one of the previously coded syringes. The investigators will have been blinded as to the contents of the syringes. The patients will either receive a combination of local anaesthetic and opiate or an opiate alone. A series of measurements will be obtained during these visits, which are designed to elicit if the patient is able to mobilize safely. These will include measurement of blood pressure in the sitting and standing position, assessment of strength in the legs and arms. Different modalities of sensation will be tested including coordination and proprioception (the ability to sense the position of a limb in space). Pain will be assessed using the visual analogue scale. The subjects will then be asked if they experience any symptoms like headache, nausea, dizziness or blurring of vision. If they are found to fit the criteria then patients will be invited to mobilize with the help of assistants. Patients will only be asked to mobilize at the 48 hour and 72 hours visits. Date: 08/08/2005 Reference: 05/Q1501/123 Online Form NHS REC Application Form – Version 4.1 4 AB/38774/1

#### Intervention Type

Procedure/Surgery

#### Phase

Not Specified

#### Primary outcome measure

Demographic data will be recorded: age, height, weight, hand dominance, ASA classification, preoperative medication, surgical procedure, blood loss and level of surgical incision. Primary outcome: The ability to walk with a thoracic epidural.

#### Secondary outcome measures

The effect of thoracic epidural blockade on each of the following measurements-systolic, diastolic, mean blood pressure, heart rate change when moving from the sitting to the upright position, leg motor power, dominant side hand grip strength, proprioception, vibration sense, and co ordination.

#### Overall study start date

01/09/2005

**Completion date** 30/09/2006

# Eligibility

#### Key inclusion criteria

All adult patients having elective thoracotomy under general anaesthesia with epidural analgesia for post operative pain relief at the Cardiothoracic Centre, Liverpool.

The statistical calculations were done based on a similar study looking at epidural analgesia in labor in an ambulatory patient (Anesth Analg 1993;77:919-24). This paper suggests a failure to ambulate in 10% of the patients in the fentanyl group. A difference of 25% between this and the fentanyl/bupivacaine group would be significant clinically. With an alpha error of 5% and a power of 89% then n=80, which is 40 patients in each group.

### Participant type(s)

Patient

#### Age group

Adult

**Sex** Both

**Target number of participants** 80

### Key exclusion criteria

1. Patients unable to mobilize preoperatively due to pre existing neurological, cardiorespiratory or locomotor disease

2. Those with known autonomic nervous system dysfunction, those on beta blockers, those with moderate severe angina (Canadian Cardiovascular Society Class 3 or 4), those with diabetes, those with known allergy to bupivacaine/ fentanyl

3. Routine contraindications to epidural catheter placement will apply

### Date of first enrolment

01/09/2005

# Date of final enrolment

30/09/2006

# Locations

**Countries of recruitment** England

United Kingdom

**Study participating centre The Cardiothoracic Centre** Liverpool United Kingdom L14 3PE

# Sponsor information

**Organisation** Record Provided by the NHSTCT Register - 2006 Update - Department of Health

### Sponsor details

The Department of Health Richmond House 79 Whitehall London United Kingdom SW1A 2NL +44 (0)20 7307 2622 dhmail@doh.gsi.org.uk

### Sponsor type

Government

Website http://www.dh.gov.uk/Home/fs/en

# Funder(s)

**Funder type** Government

### Funder Name

The Cardiothoracic Centre Liverpool NHS Trust (UK), NHS R&D Support Funding

# **Results and Publications**

#### **Publication and dissemination plan** Not provided at time of registration

Intention to publish date

Individual participant data (IPD) sharing plan

#### **IPD sharing plan summary** Not provided at time of registration