

Clinical Trial Protocol

Iranian Registry of Clinical Trials

04 Jul 2026

Comparative induction of controlled hypotension by Acupuncture point DU20 electrostimulation and Remifentanil in lumbar laminectomy

Protocol summary

Summary

This randomized clinical trial study aims to compare the induction of controlled hypotension by acupuncture point DU.20 electro stimulation and Remifentanil in the patients undergoing laminectomy. General anesthesia is induced in all patients using Fentanyl (2 mcg/kg), Propofol (2mg/kg) and Atracurium (0.5 mg/kg) and is maintained using Isoflurane (BIS 40-60). Then the patients are divided into two groups. In the control group, controlled hypotension is induced using Remifentanil added to the other anesthesia drugs and in the case group, electro stimulation of acupoint DU.20 is used instead of Remifentanil. In both groups, in spite of using these methods, if mean arterial pressure (MAP) is above 70 mmHg, Nitroglycerin will be added to the others. In the course of surgery, the hemodynamic variables, bloodlessness scale of surgical field and intraoperative blood loss are recorded and compared between both groups.

General information

Acronym

IRCT registration information

IRCT registration number: **IRCT201509213379N3**

Registration date: **2015-10-13, 1394/07/21**

Registration timing: **registered_while_recruiting**

Last update:

Update count: **0**

Registration date

2015-10-13, 1394/07/21

Registrant information

Name

Mehdi Ghaemi

Name of organization / entity

Zanjan University of Medical Sciences

Country

Iran (Islamic Republic of)

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Recruitment status

Recruitment complete

Funding source

Vice- chancellery for Research of Zanjan University of Medical Sciences

Expected recruitment start date

2015-10-02, 1394/07/10

Expected recruitment end date

2016-03-19, 1394/12/29

Actual recruitment start date

empty

Actual recruitment end date

empty

Trial completion date

empty

Scientific title

Comparative induction of controlled hypotension by Acupuncture point DU20 electrostimulation and Remifentanil in lumbar laminectomy

Public title

The effect of Acupuncture on reduction of blood pressure

Purpose

Treatment

Inclusion/Exclusion criteria

Inclusion criteria: The patients aged between 20-60 years old and classified as ASA I and ASA II who are candidated for elective laminectomy Exclusion criteria: The patients who have history of Asthma, cardiovascular, liver and renal diseases and take anticoagulant and aspirin

Age

From **20 years** old to **60 years** old

Gender

Both

Phase

N/A

Groups that have been masked

No information

Sample size

Target sample size: 54

Randomization (investigator's opinion)

Randomized

Randomization description

Blinding (investigator's opinion)

Single blinded

Blinding description

Placebo

Not used

Assignment

Parallel

Other design features

Secondary Ids

empty

Ethics committees

1

Ethics committee

Name of ethics committee

Ethics Committee of Zanjan University of Medical Sciences

Street address

Azadi Square

City

Zanjan

Postal code

4515613113

Approval date

2015-09-01, 1394/06/10

Ethics committee reference number

ZUMS.REC.1394.136

Health conditions studied

1

Description of health condition studied

Induced Hypotension

ICD-10 code

195.2

ICD-10 code description

Hypotension due to drugs

Primary outcomes

1

Description

reduction of mean arterial pressure(MAP)

Timepoint

every ten minutes after intervention

Method of measurement

mmHg by blood pressure monitor

Secondary outcomes

1

Description

bloodlessness quality of surgical field

Timepoint

every 30 minutes after intervention

Method of measurement

according to scale adapted from Dolman et al.

Intervention groups

1

Description

Electrostimulation of Acupoint Du20

Category

Treatment - Other

2

Description

infusion of Remifentanil 100 mcg/kg/min

Category

Treatment - Drugs

Recruitment centers

1

Recruitment center

Name of recruitment center

Mousavi Hospital

Full name of responsible person

Mehdi Ghaemi

Street address

No.10-5,Kosar14 st., Shahrak Niksazan

City

Zanjan

Sponsors / Funding sources

1

Sponsor

Name of organization / entity

vice-chancellery for research of Zanjan University of Medical Sciences

Full name of responsible person

Mrs. Feizy

Street address

Azadi square

City

Zanjan

Grant name

Grant code / Reference number

Is the source of funding the same sponsor

organization/entity?

Yes

Title of funding source

vice-chancellery for research of Zanjan University of Medical Sciences

Proportion provided by this source

100

Public or private sector

empty

Domestic or foreign origin

empty

Category of foreign source of funding

empty

Country of origin**Type of organization providing the funding**

empty

Person responsible for general inquiries**Contact****Name of organization / entity**

Zanjan University of Medical Sciences

Full name of responsible person

Dr. Mehdi Ghaemi

Position

Anesthesiologist

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Web page address**Sharing plan****Deidentified Individual Participant Data Set (IPD)**

empty

Study Protocol

empty

Statistical Analysis Plan

empty

Informed Consent Form

empty

Clinical Study Report

empty

Analytic Code

empty

Data Dictionary

empty