

Clinical Trial Protocol

Iranian Registry of Clinical Trials

26 Jun 2026

Effectiveness of Transcoetaneous Electrical Nerve Stimulation for Acute and chronic postvaricoceleotomy pain contro

Protocol summary

Summary

Post-operative pain following varicoceleotomy is one of the pain types which is prone to becoming chronic. The aim of the present study is to evaluate the effect of treatment with Transcoetaneous Electrical Nerve Stimulation (TENS) on the management of acute pain and prevention of its turning into chronic pain. Inclusion criteria to the study are: age range of 20-40 years old and being scheduled to undergo varicoceleotomy through high ligation approach. Exclusion criteria are: substance addiction and unwillingness of the patient to participate in the study. 80 patients referred to our center from 2012-2013 will be randomized into two groups of A and B. Both groups will receive similar premedication, anesthesia induction, airway management and maintenance, muscle relaxation antagonization, extubation and recovery. Later, 4 cm parallel to the incision lines TENS pads will be placed and both groups will receive TENS treatment. In group A, patients will receive high frequency TENS at the sensory level of current intensity for 30 minutes while patients in group B will receive current intensity of 0 (placebo). Visual analogue scale will be used for pain degree measurement. TENS therapy will be repeated at hours 6, 12 and 24 after the operation. At the mentioned stages, patients will be evaluated regarding the intensity of the pain and the amount of required analgesics. After the discharge, the intensity of the pain and the amount of required analgesics will be evaluated in the first week and first, second and third months through telephone follow-up. Finally, the collected data will be analyzed and compared.

General information

Acronym

IRCT registration information

IRCT registration number: **IRCT201112071772N9**

Registration date: **2013-07-06, 1392/04/15**

Registration timing: **retrospective**

Last update:

Update count: **0**

Registration date

2013-07-06, 1392/04/15

Registrant information

Name

Dawood Aghamohammadi

Name of organization / entity

Tabriz University of Medical Sciences

Country

Iran (Islamic Republic of)

Phone

+98 41 1381 8940

Email address

aghamohammadid@tbzmed.ac.ir

Recruitment status

Recruitment complete

Funding source

Tabriz University of Medical sciences, Vice chancellor for research

Expected recruitment start date

2012-04-19, 1391/01/31

Expected recruitment end date

2013-01-20, 1391/11/01

Actual recruitment start date

empty

Actual recruitment end date

empty

Trial completion date

empty

Scientific title

Effectiveness of Transcoetaneous Electrical Nerve Stimulation for Acute and chronic postvaricoceleotomy pain contro

Public title

Effectiveness of Transcoetaneous Electrical Nerve Stimulation for Acute and chronic postvaricocele pain control

Purpose

Prevention

Inclusion/Exclusion criteria

Inclusion criteria: ASA I-II; age 20-40, Exclusion criteria: depression; psychosis; morbid obesity; previous history of analgesic consumption; addiction

Age

From **20 years** old to **40 years** old

Gender

Male

Phase

N/A

Groups that have been masked

No information

Sample size

Target sample size: **80**

Randomization (investigator's opinion)

Randomized

Randomization description**Blinding (investigator's opinion)**

Double blinded

Blinding description**Placebo**

Used

Assignment

Parallel

Other design features**Secondary Ids**

empty

Ethics committees**1****Ethics committee****Name of ethics committee**

Tabriz University of Medical Sciences

Street address

Faculty of medicine, Vice chancellor for research,
Daneshghah street

City

Tabriz

Postal code**Approval date**

2012-02-05, 1390/11/16

Ethics committee reference number

5/4/8972

Health conditions studied**1****Description of health condition studied**

varicocelectomy

ICD-10 code

I86.1

ICD-10 code description

Scrotal varices Varicocele

Primary outcomes**1****Description**

pain

Timepoint

0, 2, 6, 12, 24 o'clock postoperative

Method of measurement

visual analogue scale

Secondary outcomes**1****Description**

Analgesic drugs

Timepoint

2, 6, 12, 24 o'clock postoperative

Method of measurement

Milligram/dose

Intervention groups**1****Description**

Transcoetaneous Electrical Nerve Stimulation 30 mint
parallel to incision site

Category

Treatment - Devices

2**Description**

Transcoetaneous Electrical Nerve Stimulation (placebo)
30 mint parallel to incision site

Category

Placebo

Recruitment centers**1****Recruitment center****Name of recruitment center**

Imam Reza teaching Hospital

Full name of responsible person

Dawood aghamohammadi

Street address**City**

Tabriz

Sponsors / Funding sources

1

Sponsor

Name of organization / entity

Research team of anesthesiology

Full name of responsible person

Mahain Seidhejazie

Street address

Third floor, Research team of anesthesiology, Faculty of Medicine, Daneshghah Street

City

Tabriz

Grant name**Grant code / Reference number****Is the source of funding the same sponsor organization/entity?**

Yes

Title of funding source

Research team of anesthesiology

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**

Anesthesiology Dept

Full name of responsible person

Dawood Aghamohammadi

Position

Assistant Professor

Other areas of specialty/work**Street address**

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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