Clinical Trial Protocol
Iranian Registry of Clinical Trials

18 Sep 2026

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

Protocol summary

Summary

Post-operative pain following varicocelectomy 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 varicocelectomy 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

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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 postvaricoceletomy pain contro

Public title
Effectiveness of Transcoetaneous Electrical Nerve Stimulation for Acute and chronic postvaricoceletomy 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
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Person responsible for scientific inquiries

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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