Clinical Trial Protocol
Iranian Registry of Clinical Trials

09 Nov 2026

Comparison of adding Magnesium Sulfate with low dose Dexamethasone on Ropivacaine solution in supraclavicular nerve plexus block for elective upper limb surgeries

Protocol summary

Study aim
Comparison of the onset of the sensory and motor block, the duration of the sensory and motor block, the duration of analgesia, as well as the total amount and dose of analgesic after the upper extremity surgery by supraclavicular nerve plexus block after adding Magnesium sulfate, Dexamethasone or Normal saline to Ropivacaine.

Design
Three arm parallel group randomised trial design of 64 patients

Settings and conduct
Clinical trial, Ayatollah Mousavi Hospital, Zanjan,Iran

Participants/Inclusion and exclusion criteria
inclusion criteria: 1.Patients in the age group of 18 to 65 years old 2.Candidates for elective upper limb surgery with ASA class I, II Non-inclusion criteria: 1.Multiple treuma 2.patients suffering from Diabietes mellitus, other neuropathies, coagulopathies, broncopumonary diseases, psychiatric diseases, opium addiction, chronic users of analgesia 3.Corticosteroid users at least in the recent year 4,Positive past allergic history to Magnesium sulfate 5.Loss of consciousness

Intervention groups
Group N(Ropivacaine5%+Normal saline 1cc) Group D(Ropivacaine5%+1ccDexamethasone4mg) Group S(Ropivacaine5%+1cc Magnesium sulfate20%)

Main outcome variables
The onset of the sensory and motor block The duration of the sensory and motor block The duration of analgesia after surgery The total amount and dose of analgesics

General information

Reason for update

Acronym

IRCT registration information
IRCT registration number: **IRCT20180325039148N3**
Registration date: **2019-06-06, 1398/03/16**
Registration timing: **prospective**

Last update: **2019-06-06, 1398/03/16**
Update count: **0**

Registration date
2019-06-06, 1398/03/16

Registrant information

Name
Saeed Jalili

Name of organization / entity

Country
Iran (Islamic Republic of)

Phone
+98 24 3313 0001

Email address
jalilis45@zums.ac.ir

Recruitment status
Recruitment complete

Funding source

Expected recruitment start date
2019-06-22, 1398/04/01

Expected recruitment end date
2019-12-22, 1398/10/01

Actual recruitment start date
empty

Actual recruitment end date
empty

Trial completion date
empty

Scientific title
Comparison of adding Magnesium Sulfate with low dose Dexamethasone on Ropivacaine solution in supraclavicular nerve plexus block for elective upper

limb surgeries

Public title
The effect of magnesium sulfate and dexamethasone on upper limb anesthesia
Purpose
Health service research
Inclusion/Exclusion criteria
Inclusion criteria:
18-65 Years old Candidates for elective upper limb surgery with ASA class I, II
Exclusion criteria:
Multiple trauma Diabetes Neuropathy Loss of consciousness Coagulopathy Broncopumonary diseases Psychiatric diseases Opium addiction Chronic using of analgesic Corticosteroid using at least in the recent year Positive past allergic history to Magnesium sulfate
Age
From **18 years** old to **65 years** old
Gender
Both

Phase
3
Groups that have been masked

- Participant
- Care provider
- Investigator

Sample size
Target sample size: **64**
Randomization (investigator's opinion)
Randomized
Randomization description
Patients in each group with roll of dice will be assigned to three treatment groups such that N 1 and 2 numbers (24cc rupivacaine 0.5% + 1cc normal saline), numbers 3 and 4 related to Group D (24cc rupivacaine 0.5% + 1cc dexamethasone 4 mg) and numbers 5 and 6 for group S (24cc rupivacaine 0.5% + 1 cc magnesium sulfate 20%).
Blinding (investigator's opinion)
Triple blinded
Blinding description
According to the same form of medications and preparing them by a technician, the reasercher won't know which drug has been used.
Placebo
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
Gavazang Blvd.,Mousavi hospital
City
Zanjan
Province
Zanjan
Postal code
4513956183
Approval date
2018-07-03, 1397/04/12
Ethics committee reference number
IR.ZUMS.REC.1397.068

Health conditions studied

1

Description of health condition studied
The effect of adding magnesium sulfate and dexamethasone to ropivacaine on the quality of supraclavicular nerve block in hand and wrist injury
ICD-10 code
S62
ICD-10 code description
Fracture at wrist and hand level

2

Description of health condition studied
The effect of adding magnesium sulfate and dexamethasone to ropivacaine on the quality of supraclavicular nerve block in forearm injury
ICD-10 code
S52
ICD-10 code description
Fracture of forearm

Primary outcomes

1

Description
Determination anesthesia and analgesia during surgery and postoperation period in hand surgeries
Timepoint
Beginnig of surgery_During of surgery_Recovery unit -up to 24 hours after surgey
Method of measurement
Visual Analogue Scale questionnaire

Secondary outcomes

empty

Intervention groups

1

Description
Control group: 24cc Ropivacaine 0.5% + 1cc Normal Saline

Category
Treatment - Drugs

2

Description
Intervention group: 24cc Ropivacaine 0.5% + 1 cc Dexamethasone 4mg
Category
Treatment - Drugs

3

Description
Intervention group: 24cc Ropivacaine 0.5% + 1 cc Magnesium sulfate 20%
Category
Treatment - Drugs

Recruitment centers

1

Recruitment center
Name of recruitment center
Ayatollah Mousavi Hospital,Zanjan
Full name of responsible person
Saeed Jalili
Street address
Ayatollah Mousavi Hospital,Gavazang Blvd,Zanjan
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Sponsors / Funding sources

1

Sponsor
Name of organization / entity
Zanjan University of Medical Sciences
Full name of responsible person
Shoghli Alireza
Street address
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Grant name
Grant code / Reference number
Is the source of funding the same sponsor organization/entity?
Yes
Title of funding source
Zanjan University of Medical Sciences
Proportion provided by this source
100
Public or private sector
Public
Domestic or foreign origin
Domestic
Category of foreign source of funding
empty
Country of origin
Type of organization providing the funding
Academic

Person responsible for general inquiries

Contact
Name of organization / entity
Zanjan University of Medical Sciences
Full name of responsible person
Saeed Jalili
Position
Associate professor
Latest degree
Specialist
Other areas of specialty/work
Anesthesiology
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Person responsible for scientific inquiries

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Person responsible for updating data

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Sharing plan

Deidentified Individual Participant Data Set (IPD)
No - There is not a plan to make this available
Justification/reason for indecision/not sharing IPD
There is no more information.
Study Protocol
No - There is not a plan to make this available
Statistical Analysis Plan
No - There is not a plan to make this available
Informed Consent Form
No - There is not a plan to make this available
Clinical Study Report
No - There is not a plan to make this available
Analytic Code
No - There is not a plan to make this available
Data Dictionary
No - There is not a plan to make this available