

Clinical Trial Protocol

Iranian Registry of Clinical Trials

10 Jun 2026

The effect of sevoflurane versus propofol on the quality of neurologic recording, recovery time and hemodynamic profile in deep brain stimulation for Parkinson surgery

Protocol summary

Study aim

To compare the effects of Propofol and Sevoflurane on the quality of the neurological examination, hemodynamic profile and duration of recovery from anesthetics in DBS surgery for Parkinson's disease

Design

Randomized double-blind clinical trial

Settings and conduct

Patients were randomly allocated into two groups of propofol and sevoflurane. The patients, assessor and the analyzer were blinded to the assignments. The setting was Rasoul Akram University hospital

Participants/Inclusion and exclusion criteria

Patients with severe Parkinson undergoing DBS Surgery

Intervention groups

Propofol Sevoflurane

Main outcome variables

Time to wake up the patient after discontinuing anesthetics Firing Rate Peak To Peak

General information

Reason for update

Acronym

Deep Brain Stimulation-DBS

IRCT registration information

IRCT registration number: **IRCT20101026005026N8**

Registration date: **2018-05-07, 1397/02/17**

Registration timing: **registered_while_recruiting**

Last update: **2018-05-07, 1397/02/17**

Update count: **0**

Registration date

2018-05-07, 1397/02/17

Registrant information

Name

Masood Mohseni

Name of organization / entity

Rasul Akram hospital, Tehran University of Medical Sciences

Country

Iran (Islamic Republic of)

Phone

+98 21 6435 2326

Email address

mohseni@med.mui.ac.ir

Recruitment status

Recruitment complete

Funding source

Vice chancellor for research - Iran University of Medical Sciences

Expected recruitment start date

2017-05-01, 1396/02/11

Expected recruitment end date

2018-05-20, 1397/02/30

Actual recruitment start date

empty

Actual recruitment end date

empty

Trial completion date

empty

Scientific title

The effect of sevoflurane versus propofol on the quality of neurologic recording, recovery time and hemodynamic profile in deep brain stimulation for Parkinson surgery

Public title

The effect of anesthetics in DBS surgery in Parkinson patients

Purpose

Treatment

Inclusion/Exclusion criteria

Inclusion criteria:

Patients with Advanced Parkinson's Patients with severe dyskinesia due to levodopa administration

Exclusion criteria:

Severe cardiovascular or ischemic diseases Uncontrolled hypertension CVA Cancer or any life-threatening agent Taking anti-coagulants Severe psychiatric disorders

Age

No age limit

Gender

Both

Phase

N/A

Groups that have been masked

- Participant
- Outcome assessor
- Data analyser

Sample size

Target sample size: **30**

Randomization (investigator's opinion)

Randomized

Randomization description

Patients were randomly allocated to the propofol/sevoflurane groups. Simple Randomization was performed using a table of random numbers.

Blinding (investigator's opinion)

Double blinded

Blinding description

The patients, outcome assessor and data analyser were blinded to the assignments

Placebo

Not used

Assignment

Parallel

Other design features

Secondary Ids

empty

Ethics committees

1

Ethics committee

Name of ethics committee

Ethics committee of Iran University of Medical Sciences

Street address

Hemmat Highway, Tehran, Iran

City

Tehran

Province

Tehran

Postal code

۱۴۴۵۶۱۳۱۳۱

Approval date

2017-04-12, 1396/01/23

Ethics committee reference number

IR.IUMS.RES.1395.9211174005

Health conditions studied

1

Description of health condition studied

Parkinson disease

ICD-10 code

G20

ICD-10 code description

Hemiparkinsonism Paralysis agitans Parkinsonism or Parkinson disease: NOS idiopathic primary

Primary outcomes

1

Description

Duration of recovery from anesthetics

Timepoint

During the targeting of subthalamic nucleus

Method of measurement

Minutes using a chronometer

2

Description

Blood pressure

Timepoint

Every 5 minutes during the maintenance of anesthesia

Method of measurement

Automatic noninvasive sphyngometer

Secondary outcomes

1

Description

Heart rate

Timepoint

Before induction, half an hour after induction, before discontinuation of anesthetics, during neurological examination every 15 minutes, at the end of surgery

Method of measurement

Continuous ECG monitoring

Intervention groups

1

Description

Propofol 30 microgram/kg for maintenace of anesthesia

Category

Treatment - Drugs

2

Description

Sevoflourane 1% for maintenance of anesthesia

Category

Treatment - Drugs

Recruitment centers

1

Recruitment center

Name of recruitment center

Rasoul Akram hospital

Full name of responsible person

Masood Mohseni

Street address

Rasoul Akram hospital, Niayesh Ave, Sattarkhan St

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1445613131

Phone

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masood.mohseni@gmail.com

Sponsors / Funding sources

1

Sponsor

Name of organization / entity

Iran University of Medical Sciences

Full name of responsible person

Ali Javad Mousavi

Street address

Iran University Of Medical Science, Hemat Highway

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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

Iran 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

Iran University of Medical Sciences

Full name of responsible person

Masood mohseni

Position

Associate professor

Latest degree

Medical doctor

Other areas of specialty/work

Anesthesiology

Street address

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Person responsible for scientific inquiries

Contact

Name of organization / entity

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Masood Mohseni

Position

Associate Professor

Latest degree

Medical doctor

Other areas of specialty/work

Anesthesiology

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Person responsible for updating data

Contact

Name of organization / entity

Iran University of Medical Sciences

Full name of responsible person

Maryam Khodaverdi

Position

Resident of Anesthesiology

Latest degree

Medical doctor

Other areas of specialty/work

Anesthesiology

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Phone

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Fax**Email**

maryamkhodaverdi@yahoo.com

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

Yes - There is a plan to make this available

Study Protocol

Yes - There is a plan to make this available

Statistical Analysis Plan

Yes - There is a plan to make this available

Informed Consent Form

Yes - There is a plan to make this available

Clinical Study Report

Yes - There is a plan to make this available

Analytic Code

Yes - There is a plan to make this available

Data Dictionary

Yes - There is a plan to make this available

Title and more details about the data/document

Data regarding primary and secondary outcomes will be available

When the data will become available and for how long

immediately after publication

To whom data/document is available

only faculty members and academic institutions

Under which criteria data/document could be used

The result of further analysis may not be presented to public without permission

From where data/document is obtainable

masood.mohseni@gmail.com

What processes are involved for a request to access data/document

A reasonable request from an academic source will be responded within 10 working days

Comments