Clinical Trial Protocol
Iranian Registry of Clinical Trials

07 Nov 2026

The effect of transcranial direct current stimulation (tDCS) on decreasing craving and preventing recurrence of methamphetamine users

Protocol summary

Study aim
Investigating the effect of transcranial Direct Current Stimulation (tDCS) on reducing the craving and preventing the recurrence of taking methamphetamine on patients referred to the addiction treatment clinic

Design
Qualified patients will be randomly divided into two real tDCS and fake tDCS groups. Accidental randomization will be performed based on random numbers. This clinical trial has a community-based, action-oriented control group with parallel and one-way blind groups.

Settings and conduct
Qualified patients will be randomly divided into two real tDCS and fake tDCS groups. Accidental randomization will be performed based on random numbers table. This clinical trial has a community-based, action-oriented control group with parallel and one-way blind groups.

Participants/Inclusion and exclusion criteria
Including criteria: aged over 18 years old; methamphetamine addiction based on DSM-V classification criteria for psychiatric and behavioral disorders; sustained clinical symptoms. Exclusion criteria: any neurological major or recent major effects; central system effects of drug use; history of epilepsy; brain surgery; tumor; intracranial metallic implants.

Intervention groups
Qualified patients based on DSM-V criteria for methamphetamine addiction will be randomly divided into two groups of tDCS and fictitious tDCS if they are eligible for inclusion in the study. Intervention group: The true tDCS group will receive 2 sessions of right anode and left cathode stimulation sessions by an experienced technician with no knowledge of the subject and an interventional therapist randomly for 20 minutes and 2 mA on the lateral posterior frontal area. Control group: The tDCS group will receive 2 mAh for 1 minute and will not receive a stream in the next 19 minutes.

Main outcome variables
The rate of craving for methamphetamine

General information

Reason for update

Acronym
tDCS

IRCT registration information
IRCT registration number: **IRCT20181117041682N1**
Registration date: **2018-11-29, 1397/09/08**
Registration timing: **prospective**

Last update: **2018-11-29, 1397/09/08**
Update count: **0**

Registration date
2018-11-29, 1397/09/08

Registrant information

Name
Ahmad Fakhri

Name of organization / entity

Country
Iran (Islamic Republic of)

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+98 61 3622 4558

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ahmad_fakhri@ajums.ac.ir

Recruitment status
Recruitment complete

Funding source

Expected recruitment start date
2018-12-22, 1397/10/01

Expected recruitment end date
2019-03-21, 1398/01/01

Actual recruitment start date
empty

Actual recruitment end date
empty

Trial completion date
empty

Scientific title
The effect of transcranial direct current stimulation (tDCS) on decreasing craving and preventing recurrence of methamphetamine users

Public title
The effect of transcranial direct current stimulation on decreasing craving

Purpose
Treatment

Inclusion/Exclusion criteria

Inclusion criteria:
Age older than 18 years old Methamphetamine addiction based on the DSM-V classification criteria for mental and behavioral disorders Sustained clinical symptoms Ability to read and write

Exclusion criteria:
Has any neurological major or recent major neurological disorder The effects of the central system of drug use History of epilepsy, brain surgery, tumor, intracerebral metal implant, symptomatic head trauma or any major psychiatric disorder

Age
From **18 years** old

Gender
Both

Phase
2-3

Groups that have been masked

- Outcome assessor

Sample size
Target sample size: **25**

Randomization (investigator's opinion)
Randomized

Randomization description
In this study, a random number table will be used. In this table, random numbers do not follow any obvious patterns for randomization

Blinding (investigator's opinion)
Single blinded

Blinding description
An expert technician with no knowledge of the subject and an electric stimulator

Placebo
Used

Assignment
Parallel

Other design features

Secondary Ids

empty

Ethics committees

1

Ethics committee

Name of ethics committee
Ethics committee of Ahvaz Jundishapur University of Medical Sciences

Street address
Golestan Blvd, Ahvaz, Khoozestan

City
Ahvaz

Province
Khouzestan

Postal code
6135715794

Approval date
2018-11-05, 1397/08/14

Ethics committee reference number
IR.AJUMS.REC.1397.566

Health conditions studied

1

Description of health condition studied
Drug abuse

ICD-10 code
Z71.51

ICD-10 code description
Drug abuse counseling and surveillance of drug abuser

Primary outcomes

1

Description
Determine the amount of craving

Timepoint
Before and after intervention

Method of measurement
VAS

Secondary outcomes

empty

Intervention groups

1

Description
Intervention group: The true tDCS group will receive 2 sessions of right anode and left cathode stimulation sessions by an experienced technician with no knowledge of the subject and an interventional therapist randomly for 20 minutes and 2 mA on the lateral posterior frontal area.

Category
Treatment - Other

2

Description
Control group: The tDCS fake group will receive 2 mAh for 1 minute and will not receive a stream in the next 19 minutes.

Category
Placebo

Recruitment centers

1

Recruitment center

Name of recruitment center
Psychiatry Clinic, Golestan Hospital
Full name of responsible person
Ahmad Fakhri
Street address
Ahvaz Golestan Hospital, Golestan Blvd,Ahvaz
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Sponsors / Funding sources

1

Sponsor

Name of organization / entity
Ahvaz University of Medical Sciences
Full name of responsible person
Mohammad Badavi
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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
Ahvaz 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
Ahvaz University of Medical Sciences
Full name of responsible person
Ahmad Fakhri
Position
Associate professor
Latest degree
Specialist
Other areas of specialty/work
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Person responsible for updating data

Contact

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Sharing plan

Deidentified Individual Participant Data Set (IPD)
Undecided - It is not yet known if there will be a plan to make this available
Study Protocol
Undecided - It is not yet known if there will be a plan to make this available
Statistical Analysis Plan
Undecided - It is not yet known if there will be a plan to make this available
Informed Consent Form
Undecided - It is not yet known if there will be a plan to make this available
Clinical Study Report
Undecided - It is not yet known if there will be a plan to make this available
Analytic Code
Undecided - It is not yet known if there will be a plan to make this available
Data Dictionary
Undecided - It is not yet known if there will be a plan to make this available