

Clinical Trial Protocol

Iranian Registry of Clinical Trials

12 Jul 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)

Phone

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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

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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

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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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Resident

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Person responsible for updating data

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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