Clinical Trial Protocol
Iranian Registry of Clinical Trials

09 Jun 2026

Investigation of effectiveness of sake yeast supplementation (Saccharomyces cerevisiae) and S-sdenosyl methionine (SAM) in pharmacoresistant epileptic patients

Protocol summary

Study aim

Evaluation of the effects of sake supplement and its active ingredient (S-adenosyl methionine) on seizures (and depression/memory function) in patients with drug-resistant epilepsy

Design

This study will be a phase 3 randomized, double-blind, placebo-controlled clinical trial with cross-sectional pattern. Study groups will include treatment group 1 (receiving sake supplement) containing 30 samples, treatment group 2 (receiving S-adenosyl methionine) containing 30 samples and eventually control group (receiving placebo) containing 30 samples. Randomization is simple, individual and by random numbers intervention and control groups

Settings and conduct

The study will be performed and conducted on 120 patients at Kosar Hospital and Imam Hossein Hospital in Semna and Tehran, respectively. Two groups of 30 patients will receive 500 mg sake (or 3200-1600 mg S-adenosyl methionine) tablets daily for 12 consecutive weeks and after 2 weeks of washout, they will receive placebo tablets daily for 12 consecutive weeks. In contrast, the other two groups of 30 people will receive placebo tablets daily for 12 consecutive weeks, and after 2 weeks of washout, they will receive the two drugs (one drug in each of the 30 groups of patients) daily for 12 consecutive weeks.

Participants/Inclusion and exclusion criteria

Inclusion criteria: Pharmacoresistant epileptic patients who have not responded to any of the anticonvulsant drugs on the market for at least one year. Exclusion criteria: Cancelations, uncontrolled blood pressure, malignancy, history of alcoholism or drug abuse, pregnancy, and lactation.

Intervention groups

Treatment group 1: Receiving sake yeast Treatment group 2: Receiving S-adenosyl methionine Control group: Receiving placebo

Main outcome variables

Seizure severity will be assessed based on the frequency of daily seizures (specified in the questionnaires)

General information

Reason for update

Acronym

IRCT registration information

IRCT registration number: **IRCT20180119038433N4**
Registration date: **2022-01-09, 1400/10/19**
Registration timing: **prospective**

Last update: **2022-01-09, 1400/10/19**
Update count: **0**

Registration date

2022-01-09, 1400/10/19

Registrant information

Name

Amin Izadi

Name of organization / entity

Country

Iran (Islamic Republic of)

Phone

+98 23 3346 5228

Email address

aminizadi1374@yahoo.com

Recruitment status

Recruitment complete

Funding source

Expected recruitment start date

2022-04-03, 1401/01/14

Expected recruitment end date

2023-01-04, 1401/10/14

Actual recruitment start date
empty
Actual recruitment end date
empty
Trial completion date
empty

Scientific title
Investigation of effectiveness of sake yeast supplementation (Saccharomyces cerevisiae) and S-sdenosyl methionine (SAM) in pharmacoresistant epileptic patients

Public title
Effect of sake yeast supplementation (Saccharomyces cerevisiae) and S-adenosyl methionine (SAM) on pharmacoresistant epilepsy
Purpose
Treatment
Inclusion/Exclusion criteria
Inclusion criteria:
Pharmacoresistant epileptic patients Patients who have not responded to any of the anticonvulsant drugs on the market for at least one year
Exclusion criteria:
Cancelation Uncontrolled blood pressure Malignancy History of alcoholism or drug abuse, Pregnancy Lactation Unreliable clinical records Patients who does not take medication Patients who does not attend the clinic orderly
Age
No age limit
Gender
Both

Phase
3
Groups that have been masked

- Participant
- Care provider
- Investigator
- Outcome assessor
- Data analyser
- Data and Safety Monitoring Board

Sample size
Target sample size: **120**
Randomization (investigator's opinion)
Randomized
Randomization description
Permuted block randomization will be performed. Blocking is usually used to balance the number of samples assigned to each of the groups studied. A common method is to ensure that during the process of random division, number of people between groups have been distributed equally. 4 blocks will be used. This means that in a study with 60 members, exactly 30 people are assigned to each group (treatment and control). We have two treatment (T) and placebo or control (C) groups. There are six different modes for 4 blocks: 1. TCCT 2. TCTC 3. TTCC 4. CTTC 5. CTCT 6. CCTT • We create random numbers by a computer. For numbers between 0 and 1/6 compound 1 (TCCT), numbers between 2.6 to 1.6 compound 2 (TCTC) and so on.
Blinding (investigator's opinion)
Double blinded
Blinding description
Medications will be coded by a third person (outside the study) (e.g., the main treatment group number 1 and placebo group number 2). Then the stickers of the medications are removed and the drugs will be available to the student (responsible for the correct follow-up and administration of the medications). Student sees only the number and does not know the type of medicine. The patient merely knows that he/she will be given a medication that will help his/her problem and is completely unaware of the type of medication. After administering the drugs and registering the data by the student, the data will be provided to the statistical analyst (which he/she knows only the number but not the type of medication). After statistical analysis, the data will be available to the researcher responsible for writing the article. To write the article, the main researcher will also use the third person (outside the study) to match the numbers to the type of medication
Placebo
Used
Assignment
Parallel
Other design features

Secondary Ids

empty

Ethics committees

1

Ethics committee
Name of ethics committee
Ethics committee of Semnan University of Medical Sciences and Health Services
Street address
Semnan, Basij BLV, Central Department (headquarter) of Semna University of Medical Sciences and Health Services
City
Semnan
Province
Semnan
Postal code
35147-99442
Approval date
2021-12-28, 1400/10/07
Ethics committee reference number
IR.SEMUMS.REC.1400.248

Health conditions studied

1

Description of health condition studied
pharmacoresistant epilepsy

ICD-10 code
G40.501
ICD-10 code description
Epileptic seizures related to external causes, not intractable, with status epilepticus

Primary outcomes

1

Description
Seizure response (daily seizure frequency)
Timepoint
Number (frequency) of seizures in patients with drug-resistant epilepsy at the beginning of the study (before the start of the study), at the end of each week after the start of the study and eventually up to two months after the end of the study
Method of measurement
Questionnaire, electroencephalograph (EEG) , physical examination

Secondary outcomes

1

Description
Memory function score
Timepoint
Evaluation of memory function by recording scores in patients with drug-resistant epilepsy at the beginning of the study (before the start of the study), at the end of each week after the start of the study and eventually up to two months after the end of the study
Method of measurement
Questionnaire and physical examination

2

Description
depression score
Timepoint
Evaluation of severity of depression by recording scores in patients with drug-resistant epilepsy at the beginning of the study (before the start of the study), at the end of each week after the start of the study and eventually up to two months after the end of the study
Method of measurement
Questionnaire and physical examination

Intervention groups

1

Description
Intervention group 1: Sake treatment (12 weeks). Participants who meet the inclusion criteria will be given Sake oral tablets every night for 12 weeks 30 minutes before bedtime. The treatment method will be oral and no special equipment will be used. Patients will be examined by a physician once a week, have an electroencephalogram recorded, and will deliver a completed questionnaire (daily seizure frequency) within one hour of consultation at the hospital. Sake medicine is in the form of an oral tablet with a dose of 500 mg and is a product of Sigma-Aldrich company. The tablets are given once a day (every night 30 minutes before bedtime) orally for 12 consecutive weeks of treatment.
Category
Treatment - Drugs

2

Description
Intervention group 2: S-adenosyl methionine treatment (12 weeks). Participants who meet the inclusion criteria will be given S-adenosyl methionine oral tablets every night for 12 weeks 30 minutes before bedtime. The treatment method will be oral and no special equipment will be used. Patients will be examined by a physician once a week, have an electroencephalogram recorded, and will deliver a completed questionnaire (daily seizure frequency) within one hour of consultation at the hospital. S-adenosyl methionine is in the form of oral tablets with a dose of 3200-1600 mg and is a product of Sigma-Aldrich company. The tablets are given once a day (every night 30 minutes before bedtime) orally for 12 consecutive weeks of treatment.
Category
Treatment - Drugs

3

Description
Control Group (placebo): Participants who meet the inclusion criteria will be given a placebo tablet every night for 12 weeks, 30 minutes before bedtime. Administration will be oral and no special equipment will be used. Patients will be examined once a week by a physician, have an electroencephalogram recorded, and will complete a completed questionnaire (daily seizure frequency) within one hour of consultation at the hospital. The placebo is in the form of an oral tablet (as same as sake or S-adenosyl methionine tablets with the same shape, size and taste) and is a product of Sigma-Aldrich company. The tablets are given once a day (every night 30 minutes before bedtime) orally for 12 consecutive weeks of treatment.
Category
Placebo

Recruitment centers

1

Recruitment center
Name of recruitment center
Kosar Hospital
Full name of responsible person
Farshid Farivar
Street address
Kosar Hospital, Semnan
City
Semnan

Province
Semnan
Postal code
3519899951
Phone
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2

Recruitment center
Name of recruitment center
Imam Hossein Hospital
Full name of responsible person
Behnam Safarpour Lima
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Shahid Madani Street , Imam Hossein Hospital, Tehran
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Province
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Email
info@ehmc.ir

Sponsors / Funding sources

1

Sponsor
Name of organization / entity
Semnan University of Medical Sciences
Full name of responsible person
Majid Mirmohammadkhani
Street address
Bassij Blvd, Semnan University of Medical Sciences, Deputy of Research, Semnan
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Postal code
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Email
majidmirmohammadkhani@yahoo.com
Grant name
Grant code / Reference number
Is the source of funding the same sponsor organization/entity?
Yes
Title of funding source
Semnan University of Medical Sciences
Proportion provided by this source
99
Public or private sector
Private
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
Semnan University of Medical Sciences
Full name of responsible person
Hooman Bozorgi
Position
Assistant professor
Latest degree
Specialist
Other areas of specialty/work
Neuroscience
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Semnan , 5th kilometer of damghan road , Semnan University of Medical Sciences , pharmacology department
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Person responsible for scientific inquiries

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Assistant professor
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Person responsible for updating data

Contact

Name of organization / entity

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Full name of responsible person

Hamed Darbanian

Position

Student

Latest degree

Bachelor

Other areas of specialty/work

Anesthesiology

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hddssd1212@gmail.com

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