

Clinical Trial Protocol

Iranian Registry of Clinical Trials

28 Jun 2026

A study to compare the effect of pulsed and continuous ultrasound in patients with chronic maxillary and frontal sinusitis

Protocol summary

Summary

The aim of this double blind study was to compare the effect of continuous ultrasound and pulsed ultrasound in patients with chronic maxillary and frontal sinusitis. In this study, 30 patients were randomly allocated to either continuous or pulsed groups. Treatment protocol for continuous ultrasound group: Treatment duration: 5 min for each maxillary sinuses, and 4 min for each frontal sinuses; Frequency: 1 MHz; Intensity: 1 W/Cm² for maxillary sinuses and 0.5 W/Cm² for frontal sinuses; Ultrasound type: continuous. Treatment protocol for pulsed ultrasound group: Treatment duration: 5 min for each maxillary sinus, and 4 min for each frontal sinuses; Frequency: 1 MHz; Intensity: 1 W/Cm² for maxillary sinuses and 0.5 W/Cm² for frontal sinuses; Ultrasound type: Pulsed (ratio: 1:9). The primary outcome measure was improvement in symptoms. After the end of the treatment, the patients were followed-up for 2 months after completion of the treatment.

General information

Acronym

IRCT registration information

IRCT registration number: **IRCT138811133259N1**

Registration date: **2010-05-29, 1389/03/08**

Registration timing: **retrospective**

Last update:

Update count: **0**

Registration date

2010-05-29, 1389/03/08

Registrant information

Name

Noureddin Nakhostin Ansari

Name of organization / entity

Tehran University of Medical Sciences, Faculty of

Rehabilitation

Country

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Recruitment status

Recruitment complete

Funding source

Research deputy, Tehran University of Medical Sciences

Expected recruitment start date

2008-03-03, 1386/12/13

Expected recruitment end date

2010-03-04, 1388/12/13

Actual recruitment start date

empty

Actual recruitment end date

empty

Trial completion date

empty

Scientific title

A study to compare the effect of pulsed and continuous ultrasound in patients with chronic maxillary and frontal sinusitis

Public title

The effect of ultrasound on chronic sinusitis

Purpose

Treatment

Inclusion/Exclusion criteria

Inclusion criteria: Chronic sinusitis criteria (persistent symptoms for 3 months, 4 episodes per year with each episode lasting at least 10 days and positive CT scan findings), no response to medical treatment Exclusion criteria: Taking drugs (antibiotics, antihistamins, and pain relievers), tumor in the area of the head and face

Age

From **16 years** old to **70 years** old

Gender

Both

Phase

N/A

Groups that have been masked

No information

Sample size

Target sample size: 30

Randomization (investigator's opinion)

Randomized

Randomization description**Blinding (investigator's opinion)**

Double blinded

Blinding description**Placebo**

Not used

Assignment

Parallel

Other design features**Secondary Ids**

empty

Ethics committees**1****Ethics committee****Name of ethics committee**

Research deputy, Tehran University of Medical Sciences

Street address

Keshavarz BLV, Qods Ave

City

Tehran

Postal code**Approval date**

2008-03-12, 1386/12/22

Ethics committee reference number

8768/132

Health conditions studied**1****Description of health condition studied**

Chronic sinusitis

ICD-10 code

J32.0, J32

ICD-10 code description

Chronic maxillary sinusitis, Chronic frontal sinusitis

Primary outcomes**1****Description**

Percent improvement

Timepoint

pretest-post test

Method of measurement

subjective

Secondary outcomes

empty

Intervention groups**1****Description**

Treatment protocol for continuous ultrasound group: Treatment duration: 5 minutes for each maxillary sinus and 4 minutes for each frontal sinus, Frequency: 1 MHz, Intensity: 1 W/cm² for maxillary sinuses and 0.5 W/cm² for frontal sinuses, Ultrasound type: continuous. Patients will receive no drugs during the study.

Category

Rehabilitation

2**Description**

Treatment protocol for pulsed ultrasound group: Treatment duration: 5 minutes for each maxillary sinus and 4 minutes for each frontal sinus, Frequency: 1 MHz, Intensity: 1 W/cm² for maxillary sinuses and 0.5 W/cm² for frontal sinuses, Ultrasound type: pulsed (pulse ratio 1:9). Patients will receive no drugs during the study.

Category

Rehabilitation

Recruitment centers**1****Recruitment center****Name of recruitment center**

Rehabilitation Faculty, Tehran University of Medical Sciences

Full name of responsible person

Dr. Nouredin Nakhostin Ansari

Street address

Enghelab Ave, Pitch-e-shemiran

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Sponsors / Funding sources**1****Sponsor****Name of organization / entity**

Research deputy, Tehran University of Medical Sciences

Full name of responsible person

Dr. Fotouhi

Street address

Qods Ave, Keshavarz BLV

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Tehran

Grant name
Grant code / Reference number
132/8768
Is the source of funding the same sponsor organization/entity?
Yes
Title of funding source
Research deputy, Tehran University of Medical Sciences
Proportion provided by this source
100
Public or private sector
empty
Domestic or foreign origin
empty
Category of foreign source of funding
empty
Country of origin
Type of organization providing the funding
empty

Person responsible for general inquiries

Contact

Name of organization / entity
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Sharing plan

Deidentified Individual Participant Data Set (IPD)

empty

Study Protocol

empty

Statistical Analysis Plan

empty

Informed Consent Form

empty

Clinical Study Report

empty

Analytic Code

empty

Data Dictionary

empty