Clinical Trial Protocol
Iranian Registry of Clinical Trials

17 Sep 2026

Evaluation of employing direct tactile pressure on the external carotid artery to relieve acute episode attack of migraine: An interventional study

Protocol summary

Study aim
Evaluation of the transient pressure effect on the middle part of external carotid artery for terminating an acute attack of migraine

Design
Interventional study without a control limb

Settings and conduct
Patients with migraine headache who come to urgent department and the intervention will be applied in this unit. Pain intensity was evaluated by Universal Pain Assessment Tools (UPAT). In safe position, applying vital signs monitoring and ipsilateral type of headache, a gentle pressure was applied on the carotid artery, lateral to the cricothyroid membrane and medial border of the Sterno- Cleido- Mastoid (SCM), by using both index and middle fingers, till the headache was relieved, following which the pressure was maintained for a period of 15 seconds. Then the middle finger was maintained at its position and the index finger slid caudally with the same pressure as far a distance of four centimeters and the pressure withdrawn slowly. After 2 minutes, patients were asked to report any change in headache which was recorded.

Participants/Inclusion and exclusion criteria
Inclusion criteria: Patients in range of 18 -45 years old, with established migraine based on International Classification of Headache Disorders (ICDH) guidelines, who had no atheromatous plaque in their carotid arteries. Exclusion criteria: Patients with histories of syncopal attacks, sensitivity of carotid sinus, cardiac dysrhythmia, neurologic disease, basilar migraine and patients with another non migraine headache symptoms

Intervention groups
Patients with migraine headache who come to urgent department. This study has not control group.

Main outcome variables
Reduction in pain intensity score.

General information

Reason for update

Acronym

IRCT registration information
IRCT registration number: **IRCT20150116020676N4**
Registration date: **2019-07-21, 1398/04/30**
Registration timing: **registered_while_recruiting**

Last update: **2019-07-21, 1398/04/30**
Update count: **0**

Registration date
2019-07-21, 1398/04/30

Registrant information

Name
Farhad Tavakoli

Name of organization / entity
Tehran University of Medical Sciences

Country
Iran (Islamic Republic of)

Phone
+98 21 2226 9950

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ftavakoli@razi.tums.ac.ir

Recruitment status
Recruitment complete

Funding source

Expected recruitment start date
2019-07-21, 1398/04/30

Expected recruitment end date
2019-09-21, 1398/06/30

Actual recruitment start date
empty

Actual recruitment end date
empty

Trial completion date

empty

Scientific title
Evaluation of employing direct tactile pressure on the external carotid artery to relieve acute episode attack of migraine: An interventional study

Public title
Effect of pressure on external carotid artery in treatment of acute migraine headache
Purpose
Treatment
Inclusion/Exclusion criteria
Inclusion criteria:
Established migraine, based on International Classification of Headache Disorders (ICDH) guidelines، in whom color doppler sonography of the carotid arteries depicted no narrowing of the carotid arteries or any atheromatous plaque.
Exclusion criteria:
Patients with histories of syncopal attacks Sensitivity of carotid sinus Cardiac dysrhythmia History of any neurologic disease Patients with another non migraine headache symptoms Basilar migraine
Age
From **18 years** old to **45 years** old
Gender
Both

Phase
N/A
Groups that have been masked
No information
Sample size
Target sample size: **60**
Randomization (investigator's opinion)
N/A
Randomization description
Blinding (investigator's opinion)
Not blinded
Blinding description
Placebo
Not used
Assignment
Single
Other design features

Secondary Ids

empty

Ethics committees

1

Ethics committee
Name of ethics committee
Ethics committee of Tehran University of Medical Sciences
Street address
Central organization of Tehran of medical sciences, Ghods St. , keshavarz Blv.
City
Tehran
Province
Tehran
Postal code
1417653761
Approval date
2018-05-20, 1397/02/30
Ethics committee reference number
IR.TUMS.IKHC.REC.1397.182

Health conditions studied

1

Description of health condition studied
Migraine headache
ICD-10 code
G43
ICD-10 code description
Migraine

Primary outcomes

1

Description
Reduction in pain score evaluated by universal pain assessment tools (UPAT)
Timepoint
2 minutes after removing the pressure on carotid artery
Method of measurement
Universal Pain Assessment Tools

Secondary outcomes

empty

Intervention groups

1

Description
Intervention group: In safe position, applying vital signs monitoring and ipsilateral type of headache, a gentle pressure was applied on the carotid artery, lateral to the cricothyroid membrane and medial border of the Sterno-Cleido- Mastoid (SCM), by using both index and middle fingers, till the headache was relieved, following which the pressure was maintained for a period of 15 seconds. Then the middle finger was maintained at its position and the index finger slid caudally with the same pressure as far a distance of four centimeters and the pressure withdrawn slowly. After 2 minutes, patients were asked to report any change in headache which was recorded.
Category
Treatment - Other

Recruitment centers

1

Recruitment center

Name of recruitment center
Emergency Department, Imam Khomeini Hospital Complex

Full name of responsible person
Farhad Tavakoli

Street address
Imam Khomeini Hospital, Keshavariz Blvd.

City
Tehran

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14197-33141

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Sponsors / Funding sources

1

Sponsor

Name of organization / entity
Tehran University of Medical Sciences

Full name of responsible person
Shahin Akhond zadeh M.D

Street address
,Imam Khomeini Hospital, Keshavariz Blvd.

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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
Tehran 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
Tehran University of Medical Sciences

Full name of responsible person
Farhad Tavakoli

Position
Pain fellowship

Latest degree
Subspecialist

Other areas of specialty/work
Anesthesiology

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Person responsible for scientific inquiries

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Person responsible for updating data

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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
All data about the results will be accessible.
When the data will become available and for how long
Access to patients data will be available 6 months after publication
To whom data/document is available
Data and results from this study only available for scientific and academic centers.
Under which criteria data/document could be used
There is no limitation for accessible data analyzing.
From where data/document is obtainable
data request will be replied be this email address: fahatv@yahoo.com
What processes are involved for a request to access data/document
After sending data request email, we will answer in 2 weeks.
Comments