

Clinical Trial Protocol

Iranian Registry of Clinical Trials

30 May 2026

Analysis and Comparison of the Variations of Blood Flow velocity in Doppler Ultrasound of Brain Vessels before and after the Intra arterial Injection of Papaverine during the Operation of Patients Suffering from Brain Aneurysm in Al-Zahra Hospital, Isfahan, Iran during 2011-2012

Protocol summary

Summary

Analysis and Comparison of the Variations of Blood Flow velocity in Doppler Ultrasound of Brain Vessels before and after the Intra arterial Injection of Papaverine during the Operation of Patients Suffering from Brain Aneurysm that decrease Blood Flow velocity cause to prevention & treat the vasospasm. The entrance criteria to the study included the followings: infliction to cerebral Aneurysm suffering from Sub Arachnoidhemorrhage and were candidates of surgical operation for any reason regardless of the time of hemorrhage; not being inflicted to Parkinson's disease; not being in complete heart block A.V condition; not being inflicted to Glaucoma; not being pregnant and the patient's consent. The patients that encountered brain death after the hemorrhage under Arachnoid were disregarded from the study. The procedure was as follows: the qualified patients were examined under the Microvascular Doppler Ultrasound (MDS) during the operation and before the Papaverine injection; and the blood flow velocity in cerebral arteries of these patients were measured, then 200mg Papaverine, by Insulin Syringe through the main arterials of brain proximal to Aneurysm, is injected intra arterially. Thirty minutes after the injection of medicine, the patients were examined by Doppler Ultrasound (MDS) again and of the arterial blood flowvelocity was measured.

General information

Acronym

IRCT registration information

IRCT registration number: **IRCT2013010411996N1**

Registration date: **2013-01-26, 1391/11/07**

Registration timing: **retrospective**

Last update:

Update count: **0**

Registration date

2013-01-26, 1391/11/07

Registrant information

Name

Mohamad Motahari

Name of organization / entity

Isfahan University of Medical Sciences

Country

Iran (Islamic Republic of)

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Recruitment status

Recruitment complete

Funding source

Isfahan University of Medical Sciences

Expected recruitment start date

2011-04-09, 1390/01/20

Expected recruitment end date

2012-08-21, 1391/05/31

Actual recruitment start date

empty

Actual recruitment end date

empty

Trial completion date

empty

Scientific title

Analysis and Comparison of the Variations of Blood Flow velocity in Doppler Ultrasound of Brain Vessels before and after the Intra arterial Injection of Papaverine during the Operation of Patients Suffering from Brain Aneurysm in Al-Zahra Hospital, Isfahan, Iran during 2011-2012

Public title

Analysis Injection of Papaverine in the Brain Vessels for to prevent some complication of Brain bleeding

Purpose

Prevention

Inclusion/Exclusion criteria

The entrance criteria to the study included the followings: inflection to cerebral Aneurysm suffering from Sub Arachnoidhemorrhage and were candidates of surgical operation for any reason regardless of the time of hemorrhage; not being inflected to Parkinson's disease; not being in complete heart block A.V condition; not being inflicted to Glaucoma; not being pregnant and the patient`s consent. The patients that encountered brain death after the hemorrhage under Arachnoid were disregarded from the study.

Age

No age limit

Gender

Both

Phase

1

Groups that have been masked

No information

Sample size

Target sample size: 20

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

medical university of Isfahan

Street address

st.hezarjerib, medical university of Isfahan

City

Isfahan

Postal code

Approval date

2011-02-20, 1389/12/01

Ethics committee reference number

389467

Health conditions studied

1

Description of health condition studied

Vasospasm of cerebral vessels

ICD-10 code

G45.9

ICD-10 code description

Vasospasm of cerebral vessels

Primary outcomes

1

Description

Decrease Blood Flow velocity

Timepoint

30 min

Method of measurement

Doppler Ultrasound sec/cm

Secondary outcomes

1

Description

Increase Blood Flow velocity

Timepoint

30 min

Method of measurement

Doppler Ultrasound

Intervention groups

1

Description

The procedure was as follows: the qualified patients were examined under the Microvascular Doppler Ultrasound (MDS) during the operation and before the Papaverine injection; and the blood flow velocity in cerebral arteries of these patients were measured, then 200mg Papaverine, by Insulin Syringe through the main arterials of brain proximal to Aneurysm, is injected intra arterially. Thirty minutes after the injection of medicine, the patients were examined by Doppler Ultrasound (MDS) again and of the arterial blood flowvelocity was measured. Information of the patients were recorded in a checklist that included personal and case features of the patient, age, sex and the blood flowvelocity, before and after Papaverine injection. At the end, the data were analyzed by SPSS software version 20 using chi-square, two independent sample T test and paired sample T test.

Category

Treatment - Drugs

Recruitment centers

1

Recruitment center

Name of recruitment center

Al-Zahra Hospital of Isfahan

Full name of responsible person

mohamad motahari

Street address

Dep. neurosurgery oh the Al-Zahra Hospital of Isfahan

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

Medical Univercity of Isfahan

Full name of responsible person

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st.Hezar jerib ,Medical Univercity of isfahan

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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

Medical Univercity of Isfahan

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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Full name of responsible person

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Web page address**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