Clinical Trial Protocol
Iranian Registry of Clinical Trials

01 Jun 2026

The effect of acupressure on hypotension after spinal anesthesia in cesarean section

Protocol summary

Study aim
The effect of acupressure on hypotension after spinal anesthesia in cesarean section
Design
The clinical trial included a control group, and probability sampling and participant allocated randomly table.
Settings and conduct
This clinical trial study was performed on 64 mothers referred to Imam Reza Hospital. In the intervention group at least 15-20 minutes before spinal anesthesia the pressure is performed at Baihui DU-20, Hegu, ST36 and Neiguan pressure points three times for about 30-60 seconds. The intervention is not performed in the control group. Mother's blood pressure and heart rate will be monitored and recorded every 3 minutes until the end of the operation after assurance of sufficient block level and start of the operation.
Participants/Inclusion and exclusion criteria
single pregnancy, gestational age 38-40 weeks based on first-trimester ultrasound, Systolic blood pressure 100-140mmHg, elective Cesarean section, no medical or midwifery sickness in the current pregnancy such as gestational diabetes & preeclampsia
Intervention groups
In the intervention group, at least 15-20 minutes before spinal anesthesia the pressure is performed at Baihui DU-20, Hegu, ST36 and Neiguan pressure points three times about for 30-60 seconds.
Main outcome variables
blood pressure

General information

Reason for update
Acronym
IRCT registration information
IRCT registration number: **IRCT20200312046752N1**
Registration date: **2020-04-23, 1399/02/04**
Registration timing: **retrospective**
Last update: **2020-04-23, 1399/02/04**
Update count: **0**
Registration date
2020-04-23, 1399/02/04

Registrant information
Name
Marzieh Ghasemi
Name of organization / entity
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Iran (Islamic Republic of)
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Recruitment status
Recruitment complete
Funding source

Expected recruitment start date
2019-06-25, 1398/04/04
Expected recruitment end date
2020-04-23, 1399/02/04
Actual recruitment start date
empty
Actual recruitment end date
empty
Trial completion date
empty

Scientific title
The effect of acupressure on hypotension after spinal anesthesia in cesarean section

Public title
The effect of acupressure on hypotension after anesthesia in cesarean section
Purpose
Prevention
Inclusion/Exclusion criteria
Inclusion criteria:

The gestational age is 38-40 weeks (based on first trimester ultrasound) Systolic blood pressure is 100-140 mmHg Single pregnancy Elective Cesarean section

Exclusion criteria:

Gestational diabetes Preeclampsia

Age

No age limit

Gender

Female

Phase

N/A

Groups that have been masked

No information

Sample size

Target sample size: **64**

Randomization (investigator's opinion)

Randomized

Randomization description

Balanced block randomization

Blinding (investigator's opinion)

Not blinded

Blinding description

Placebo

Not used

Assignment

Parallel

Other design features

Secondary Ids

empty

Ethics committees

1

Ethics committee

Name of ethics committee

Ethics committee of Mashhad University of Medical Sciences

Street address

Daneshgah Ave, Mashhad Town

City

Mashhad

Province

Razavi Khorasan

Postal code

9138813944

Approval date

2019-02-18, 1397/11/29

Ethics committee reference number

IR.MUMS.NURSE.REC.1398.023

Health conditions studied

1

Description of health condition studied

Hypotension

ICD-10 code

I95.9

ICD-10 code description

Idiopathic hypotension

Primary outcomes

1

Description

Hypotension

Timepoint

The beginning of spinal anesthesia until the end of cesarean section every 3 minutes

Method of measurement

Mercury barometer

Secondary outcomes

empty

Intervention groups

1

Description

This two-group randomized clinical trial will be carried out on 64 pregnant women admitted for elective cesarean section with spinal anesthesia at Imam Reza Hospital after the approval of the Ethics Committee of the University of Medical Sciences in Mashhad, Iran. After clarifying the purposes of the study and obtaining written consent from the individuals, sampling will be performed by the consideration of the ethical codes.Non-probability sampling will be using based on convenient sampling and inclusion / exclusion criteria. Then the selected participants will be allocated randomly to two groups of acupressure and control using a random number table.Inclusion criteria: single pregnancy, gestational age 38-40 weeks based on first-trimester ultrasound, Systolic blood pressure 100-140mmHg, elective cesarean section, no medical or midwifery sickness in the current pregnancy such as gestational diabetes & preeclampsia. All intraoperative problems will be excluded such as bleeding more than 1.5 liters, prolonged operation time to more than one hour. Mothers' primary blood pressure and heart rate will be measured and recorded after entering the operating room and before starting the intervention..Then, at least 15-20 minutes before spinal anesthesia the pressure will be performed by the researcher at the pressure points three times for about 30-60 seconds. These pressure points are as follows:Baihui DU-20(At the head and with cun5 distance from the hair growth line), Hegu(On the back of the hand between the 1st and 2nd metacarpal bones and on the radial side of the second metacarp), ST36(3cun below knee joint) and Neiguan(4-5 cm above the first transverse wrist crease, located in the path between the median nerve and between the palms and the bending of the lower arm) .Mother's blood pressure and heart rate will be monitored and recorded every 3 minutes until the end of the operation after assurance of sufficient block level and start of the operation.

Category

Prevention

2

Description
Control group: The control group will be receive routine care. Mother's blood pressure and heart rate will be monitored and recorded every 3 minutes until the end of the operation after assurance of sufficient block level and start of the operation
Category
Prevention

Recruitment centers

1

Recruitment center
Name of recruitment center
Imam Reza hospital
Full name of responsible person
Abedian Zahra
Street address
Imam Reza Square, Imam Reza Educational and Research Center, Mashhad
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9137913316
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Sponsors / Funding sources

1

Sponsor
Name of organization / entity
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Full name of responsible person
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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
Mashhad 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
Esfahan University of Medical Sciences
Full name of responsible person
Marzieh Ghasemi
Position
Student
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Sharing plan

Deidentified Individual Participant Data Set (IPD)

No - There is not a plan to make this available

Justification/reason for indecision/not sharing IPD

No more information

Study Protocol

No - There is not a plan to make this available

Statistical Analysis Plan

No - There is not 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

Not applicable

Data Dictionary

Not applicable