Clinical Trial Protocol
Iranian Registry of Clinical Trials

07 Nov 2026

The effectiveness of acupressure on pain and anxiety in patients undergoing bone marrow biopsy

Protocol summary

Summary

This interventional study is double blind clinical trial that examines the acupressure effect on pain and anxiety in patients undergoing bone marrow biopsy. The participants will be randomized into three groups of 30 patients (intervention, control and placebo). Half-hour before biopsy, all patients complete Spielberger anxiety questionnaire and the vital signs will be recorded by co-researcher. In the intervention group, the acupressure will be performed using researcher's thumb on the He7 (anti-anxiety point) and the LI4 (anti-pain point). In the placebo group, the acupressure method is the same but in the different points without any anti-anxiety and anti-pain effect. No procedure will be performed in the control group. The anxiety and vital signs will be recorded again during and immediately after the biopsy. The pain will be measured using a visual analogue scale (VAS) after the biopsy was taken.

General information

Acronym

IRCT registration information

IRCT registration number: **IRCT201201038100N2**
Registration date: **2012-05-11, 1391/02/22**
Registration timing: **prospective**

Last update:
Update count: **0**

Registration date

2012-05-11, 1391/02/22

Registrant information

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Name of organization / entity
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Recruitment status

Recruitment complete

Funding source
Nursing and Midwifery Care Research Center

Expected recruitment start date

2012-08-21, 1391/05/31

Expected recruitment end date

2013-02-19, 1391/12/01

Actual recruitment start date

empty

Actual recruitment end date

empty

Trial completion date

empty

Scientific title

The effectiveness of acupressure on pain and anxiety in patients undergoing bone marrow biopsy

Public title

The effect of acupressure on pain and anxiety

Purpose

Treatment

Inclusion/Exclusion criteria

Inclusion criteria: patients who are 18-65 years old, undergo bone marrow biopsy for the first time; have no previous experience of acupressure or acupuncture; have sufficient visual acuity to mark the visual analogue scale; are able to read; are not a professional person with knowledge of biopsy procedure; have no barrier such as IV catheters preventing access to the points of acupressure. Exclusion criteria: occurrence of any problem or unexpected event during the biopsy procedure; patient's refusal to continue with the study.

Age

From **18 years** old to **65 years** old

Gender

Both

Phase

N/A

Groups that have been masked

No information

Sample size

Target sample size: **90**

Randomization (investigator's opinion)

Randomized

Randomization description

Blinding (investigator's opinion)

Double blinded

Blinding description

Placebo

Used

Assignment

Parallel

Other design features

Secondary Ids

empty

Ethics committees

1

Ethics committee

Name of ethics committee

Vice-chancellor for research, Tehran University of Medical Sciences

Street address

6th floor, Central building of the university, corner of Ghods St., Keshavarz Blvd.

City

Tehran

Postal code

Approval date

2012-03-05, 1390/12/15

Ethics committee reference number

45519

Health conditions studied

1

Description of health condition studied

cancer

ICD-10 code

C79.5

ICD-10 code description

Secondary malignant neoplasm of bone and bone marrow

Primary outcomes

1

Description

pain

Timepoint

During and immediately after the biopsy

Method of measurement

visual analouge scale

2

Description

anxiety

Timepoint

Before, during and immediately after the biopsy

Method of measurement

Spielberger anxiety questionnaire

Secondary outcomes

empty

Intervention groups

1

Description

In the experimental group, acupressure will be apply using the researcher thumb on the transverse fold of wrist which is directly in contact with flexor tendon, Carmen Ulnarys, known as “the seventh heart” or He7. This site is known as an anti-anxiety point in the traditional medicine. The same steps will be done in “Hugo” point or LI4 which is located in the hand, between the first and second metacarpal bones and in the traditional medicine known as an anti-pain point.

Category

Treatment - Other

2

Description

In the placebo group, the same method will be performed but in different points that do not have any effect on anxiety or pain in the traditional medicine.

Category

Placebo

3

Description

No procedure will be performed in the control group.

Category

Other

Recruitment centers

1

Recruitment center

Name of recruitment center

Shariati Hospital

Full name of responsible person

Street address

City

Tehran

Sponsors / Funding sources

1

Sponsor
Name of organization / entity
Nursing and Midwifery Care Research Center
Full name of responsible person
Dr. Reza Negarandeh
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Nursina and Midwifery, Tehran University of Medical Sciences, Tohid sq
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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
Nursing and Midwifery Care Research Center
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

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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