Clinical Trial Protocol
Iranian Registry of Clinical Trials

22 Nov 2026

Compare the effect of temperature equalization of intravenous administration with body temperature and intravenous administration with environment temperature on occurrence of phlebitis and dwell time of short peripheral intravenous catheter in patients admitted to internal ward of Emam Ali' hospital in Sarayan

Protocol summary

Summary

Objectives: Survey of the effect of temperature equalization of intravenous administration with body temperature on occurrence of phlebitis and dwell time of intravenous catheters. Design: This study is a randomized clinical trial. The sample includes 106 patients undergoing intravenous administration in Emam Ali hospital of Sarayan city in province of South Khorasan in Iran will be allocated alternately in control (53) and intervention (53) groups by permutation blocks with four blocks. Setting and conduct: First, a checklist will be used to collect demographic data and information related to infusion. After qualifying for inclusion, catheter 22 gage according to Infusion Nursing Society (INS) standards will be inserted to vein in anterior forearm (away from elbow and wrist) by trained nurses. In intervention group; Solutions and medications will be infused by infusion pump SN-1500SERIAL (made in china) at range of body normal temperature (37℃) and in control group (solutions and Medications, similar to the intervention group) will be infused at a mean temperature of environment (24℃) by infusion pump. Insertion sites were observed every 2 hours for evidence of phlebitis according to INS Phlebitis Scale and dwell time of catheter determined at hours. 1 and 2 degrees of phlebitis scale will be considered as occurrence of Phlebitis and dwell time of catheters based on hours (between insertion and discontinuing of catheter) will be measured. For analyzing of finding, descriptive and inferential statistics will be used. Significant level will be considered less than 0.05. Intervention: temperature equalization of intravenous administration with body temperature (37) in intervention group and intravenous administration at a mean temperature of environment (24℃) on control group. Main outcome Measures: Occurrence of phlebitis and dwell time of intravenous catheter.

General information

Acronym

IRCT registration information

IRCT registration number: **IRCT2017011531959N1**
Registration date: **2017-02-19, 1395/12/01**
Registration timing: **registered_while_recruiting**

Last update:
Update count: **0**

Registration date

2017-02-19, 1395/12/01

Registrant information

Name

Amin Pirooz Seghaleh

Name of organization / entity

Gonabad University of Medical Sciences

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Recruitment status

Recruitment complete

Funding source

Vice Chancellor for Research of Gonabad University of Medical Sciences

Expected recruitment start date

2017-01-20, 1395/11/01

Expected recruitment end date

2017-03-19, 1395/12/29

Actual recruitment start date

empty

Actual recruitment end date

empty

Trial completion date

empty

Scientific title

Compare the effect of temperature equalization of intravenous administration with body temperature and intravenous administration with environment temperature on occurrence of phlebitis and dwell time of short peripheral intravenous catheter in patients admitted to internal ward of Emam Ali' hospital in Sarayan

Public title

The effect of temperature of intravenous administration on occurrence of phlebitis and dwell time of intravenous catheters.

Purpose

Prevention

Inclusion/Exclusion criteria

Inclusion Criteria: Having informed consent for research; Age 18-65 years; having full consciousness; not having underlying diseases such as leukemia; immune deficiency and dermatitis; healthy upper limb, do not receive Immunosuppressant’s drug and chemotherapy; having a minimum of 72 hours intravenous catheter; don’t receive drugs that stimulate the vein wall and solution Hyperosmolar; no history of intravenous drug addiction. Exclusion Criteria: Disrupting or failure to completing the study because of transition to other unit or death; unwillingness to continue the study; need to receive stimulating and Hyperosmolar solutions and drugs during the study; receive intravenous fluids and medications less than 72 hours; sensitivity to adhesives.

Age

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

Gender

Both

Phase

2-3

Groups that have been masked

No information

Sample size

Target sample size: **106**

Randomization (investigator's opinion)

Randomized

Randomization description

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 Gonabad University of Medical Sciences

Street address

Next to the Asian road

City

Gonabad

Postal code

Approval date

2016-07-20, 1395/04/30

Ethics committee reference number

IR.GMU.REC.1395.57

Health conditions studied

1

Description of health condition studied

Phlebitis

ICD-10 code

I80.8

ICD-10 code description

Phlebitis and thrombophlebitis of other sites

Primary outcomes

1

Description

Phlebitis

Timepoint

24, 48 and 72 hours after intervention

Method of measurement

Phlebitis Scale from the Infusion Nurses society

Secondary outcomes

1

Description

Dwell time of intravenous catheter

Timepoint

Time between insertion and discontinue of catheter

Method of measurement

Per hour

Intervention groups

1

Description

Intervention group: temperature equalization of

intravenous administration with body temperature (37℃) with infusion pump.

Category

Prevention

2

Description

In control group: intravenous administration at a mean temperature of environment (24℃) with infusion pump.

Category

Treatment - Drugs

Recruitment centers

1

Recruitment center

Name of recruitment center

Emam Ali Hospital

Full name of responsible person

Amin Pirooz

Street address

Emam Ali Hospital, Shafa boulevard

City

Sarayan

Sponsors / Funding sources

1

Sponsor

Name of organization / entity

Vice Chancellor for Research of Gonabad University of Medical Sciences

Full name of responsible person

Alii Mohammadpur

Street address

Gonabad University of Medical Sciences, Next to the Asian Road

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Gonabad

Grant name

Grant code / Reference number

Is the source of funding the same sponsor organization/entity?

Yes

Title of funding source

Vice Chancellor for Research of Gonabad 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

Gonabad University of Medical Sciences

Full name of responsible person

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Position

MSc in Nursing

Other areas of specialty/work

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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