Clinical Trial Protocol
Iranian Registry of Clinical Trials

07 Nov 2026

The effect of Quercetin and Tannic acid on the treatment of phlebitis caused by venous catheters

Protocol summary

Summary

This randomized, single-blind placebo controlled clinical trial will be performed on 120 patients hospitalized with peripheral venous catheters in the internal ward of Vali-Asr Hospital, Birjand. The participants will be selected by convenience sampling and then randomly allocated to Quercetin, Tannic acid, combination or vehicle controlled groups (n=30 per group). The inclusion criteria will include having an IV catheter; age between 18 to 60 years; hospitalization in the internal ward for at least 72 hours; insensitivity to wound glue or medication; lack of skin diseases in the area of phlebitis; having at least one of the phlebitis symptoms (pain, redness, irritation). Exclusion criterion is discharge time of less than three days. Upon phlebitis onset, the peripheral catheter will be removed and posited in another place. Before the intervention, the severity of the phlebitis will be recorded based on a four-degree scale. Accordingly, those with a phlebitis severity from 1 to 3 will be randomly allocated to one of the study groups. The treatment will be carried out for 72 hours in 12-hour intervals in the area of phlebitis. The area will be checked every 12 hours for the presence of symptoms (warmth, redness, pain, or tenderness and swelling) and phlebitis intensity.

General information

Acronym

IRCT registration information

IRCT registration number: **IRCT2015061422738N1**
Registration date: **2016-01-17, 1394/10/27**
Registration timing: **registered_while_recruiting**

Last update:
Update count: **0**

Registration date

2016-01-17, 1394/10/27

Registrant information

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Sakineh Ghorbani

Name of organization / entity

Birjand University of Medical Sciences

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Recruitment status

Recruitment complete

Funding source

Birjand University of Medical Sciences

Expected recruitment start date

2015-10-23, 1394/08/01

Expected recruitment end date

2016-03-20, 1395/01/01

Actual recruitment start date

empty

Actual recruitment end date

empty

Trial completion date

empty

Scientific title

The effect of Quercetin and Tannic acid on the treatment of phlebitis caused by venous catheters

Public title

The Effect of Phytochemicals on the treatment of Phlebitis

Purpose

Treatment

Inclusion/Exclusion criteria

IInclusion criteria: having an IV catheter, gauge No. 20 (with all catheters of an essentially single brand), age between 18-60 years old, hospitalization in the internal medicine ward for at least 72 hours, no allergy to the

drugs and the wound dressing, lack of blood transfusion, systolic blood pressure between 90 to 180 mmHg, no diabetes, no skin disease in the area of phlebitis, no pregnancy or lactation, having at least one phlebitis symptom (pain, redness, irritation) around the area, no chemical or herbal oil use for treatment of the phlebitis during the study, no history of allergy to the plants containing Quercetin or Tannic acid, using upper limbs for catheterization, using aseptic conditions for catheterization Exclusion criteria: patients discharged before three days, taking contraceptive drugs, patients with known comorbidities including hyper-coagulability states (e.g., anti-cardiolipin antibodies, anti-phospholipid antibodies, and vitamin C deficiency)

Age
From **18 years** old to **60 years** old

Gender
Both

Phase
N/A

Groups that have been masked
No information

Sample size
Target sample size: **120**

Randomization (investigator's opinion)
Randomized

Randomization description

Blinding (investigator's opinion)
Single blinded

Blinding description

Placebo
Used

Assignment
Factorial

Other design features

Secondary Ids

empty

Ethics committees

1

Ethics committee

Name of ethics committee
Birjand University of Medical Sciences

Street address
Ayatollah Ghaffari Street, Birjand University of Medical Sciences,

City
Birjand

Postal code
9717853577

Approval date
2015-06-08, 1394/03/18

Ethics committee reference number
ir.bums.1394.28

Health conditions studied

1

Description of health condition studied
phlebitis

ICD-10 code
T80.1

ICD-10 code description
Vascular complications following infusion, transfusion and therapeutic injection

Primary outcomes

1

Description
phlebitis

Timepoint
Before and 12 hours after treatment for 72 hours

Method of measurement
4 degree visual phlebitis scale

Secondary outcomes

1

Description
Dermal side effects

Timepoint
12 hours for 72 hours

Method of measurement
Observation

Intervention groups

1

Description
Use of Placebo (cream base) in the control group for 72 hours in 12-hour intervals in the area of phlebitis

Category
Placebo

2

Description
Use of Tannic acid 7% in intervation group for 72 hours in 12-hour intervals in the area of phlebitis

Category
Treatment - Drugs

3

Description
Use of Quercetin 2% in intervation group for 72 hours in 12-hour intervals in the area of phlebitis

Category
Treatment - Drugs

4

Description
Use the combination of Quercetin 2% and Tannic acid %7

in an intervention group for 72 hours in 12-hour intervals in the area of phlebitis

Category

Treatment - Drugs

Recruitment centers

1

Recruitment center

Name of recruitment center

Valiasr Hospital

Full name of responsible person

Mohsen Foadoddini

Street address

Valiasr Hospital, Ayatollah Ghafari Street, Birjand

City

Birjand

Sponsors / Funding sources

1

Sponsor

Name of organization / entity

Deputy of Research and Technology, Birjand University of Medical Sciences

Full name of responsible person

Gholam-Reza Sharifzaedh

Street address

Birjand University of Medical Sciences, Ayatollah Ghaffari Street

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Birjand

Grant name

Grant code / Reference number

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

Yes

Title of funding source

Deputy of Research and Technology, Birjand 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

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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