

# Clinical Trial Protocol

## Iranian Registry of Clinical Trials

10 Jun 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

##### Name

Sakineh Ghorbani

##### Name of organization / entity

Birjand University of Medical Sciences

##### Country

Iran (Islamic Republic of)

##### Phone

+98 56 3233 9085

##### Email address

s.ghorbani@bums.ac.ir

#### 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

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

#### Category

Treatment - Drugs

### 3

#### Description

Use of Quercetin 2% in intervention 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

**City**

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**

Birjand University of Medical Sciences

**Full name of responsible person**

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PhD in Physiology

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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*