

Clinical Trial Protocol

Iranian Registry of Clinical Trials

10 Jun 2026

Ultrasound-guided peripheral intravenous access versus traditional approaches in patients with difficult intravenous access in the emergency room

Protocol summary

Summary

The purpose of this investigation is to compare ultrasound-guided peripheral intravenous access versus traditional approaches in patients with difficult intravenous access in the emergency room. Inclusion criteria may include factors such as age more than 18 years; emergency admission; and unsuccessful attempt by nurse. Exclusion criteria may include factors such as pregnancy and ongoing need for central venous access, hemodialysis, vaso-active drugs. Target sample size is 42 who has failure IV-line attempt. After determining candidacy, a tourniquet was placed on a patient's arm at the level of the mid biceps. All the target samples are divided into two groups: traditional IV-line access versus ultrasound-guided peripheral intravenous access. Complications of two methods will be compared during presence at emergency room.

General information

Acronym

IRCT registration information

IRCT registration number: **IRCT201408097751N4**

Registration date: **2015-03-17, 1393/12/26**

Registration timing: **registered_while_recruiting**

Last update:

Update count: **0**

Registration date

2015-03-17, 1393/12/26

Registrant information

Name

Davood Farsi

Name of organization / entity

TUMS

Country

Iran (Islamic Republic of)

Phone

+98 21 6652 5327

Email address

dfarsi@sina.tums.ac.ir

Recruitment status

Recruitment complete

Funding source

Iran University of Medical Sciences

Expected recruitment start date

2014-07-06, 1393/04/15

Expected recruitment end date

2016-09-22, 1395/07/01

Actual recruitment start date

empty

Actual recruitment end date

empty

Trial completion date

empty

Scientific title

Ultrasound-guided peripheral intravenous access versus traditional approaches in patients with difficult intravenous access in the emergency room

Public title

Ultrasonography-Guided Peripheral Intravenous Access Versuss

Purpose

Diagnostic

Inclusion/Exclusion criteria

Inclusion criteria: Age>18 years; emergency admission; unsuccessful attempt by nurse; Exclusion criteria: pregnancy; ongoing need for central venous access; hemodialysis, vaso-active drugs

Age

From **18 years** old

Gender

Both

Phase

N/A

Groups that have been masked

No information

Sample size

Target sample size: 42

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

Iran University of Medical Sciences

Street address

Iran University of Medical, Hemmat highway, Tehran

City

Tehran

Postal code

Approval date

2014-07-06, 1393/04/15

Ethics committee reference number

1684//105//93//۵

Health conditions studied

1

Description of health condition studied

General symptoms and signs

ICD-10 code

R50

ICD-10 code description

Fever of other and unknown origin

2

Description of health condition studied

General symptoms and signs

ICD-10 code

R53

ICD-10 code description

Malaise and fatigue

3

Description of health condition studied

General symptoms and signs

ICD-10 code

R54

ICD-10 code description

Senility

4

Description of health condition studied

General symptoms and signs

ICD-10 code

R55

ICD-10 code description

Syncope and collapse

5

Description of health condition studied

General symptoms and signs

ICD-10 code

R56

ICD-10 code description

Convulsions not elsewhere classified

6

Description of health condition studied

General symptoms and signs

ICD-10 code

R57

ICD-10 code description

Shock not elsewhere classified

7

Description of health condition studied

General symptoms and signs

ICD-10 code

R58

ICD-10 code description

Haemorrhage not elsewhere classified

8

Description of health condition studied

General symptoms and signs

ICD-10 code

R59

ICD-10 code description

Enlarged lymph nodes

9

Description of health condition studied

General symptoms and signs

ICD-10 code

R51

ICD-10 code description

Headache

10

Description of health condition studied

General symptoms and signs

ICD-10 code

R52

ICD-10 code description

Pain not elsewhere classified

11

Description of health condition studied

General symptoms and signs

ICD-10 code

R60

ICD-10 code description

Oedema not elsewhere classified

12

Description of health condition studied

General symptoms and signs

ICD-10 code

R61

ICD-10 code description

Hyperhidrosis

13

Description of health condition studied

General symptoms and signs

ICD-10 code

R62

ICD-10 code description

Lack of expected normal physiological development

14

Description of health condition studied

General symptoms and signs

ICD-10 code

R63

ICD-10 code description

Symptoms and signs concerning food and fluid intake

15

Description of health condition studied

General symptoms and signs

ICD-10 code

R64

ICD-10 code description

Cachexia

16

Description of health condition studied

General symptoms and signs

ICD-10 code

R65

ICD-10 code description

Systemic Inflammatory Response Syndrome

17

Description of health condition studied

General symptoms and signs

ICD-10 code

R68

ICD-10 code description

Other general symptoms and signs

18

Description of health condition studied

General symptoms and signs

ICD-10 code

R69

ICD-10 code description

Unknown and unspecified causes of morbidity

Primary outcomes

1

Description

Duration of Traditional Iv-line Access

Timepoint

At the beginning of study

Method of measurement

Second

2

Description

Duration of ultrasonography-guided peripheral intravenous access

Timepoint

At the beginning of study

Method of measurement

Second

Secondary outcomes

1

Description

Reason of using ultrasonography-guided peripheral intravenous access

Timepoint

At the beginning of study

Method of measurement

Observe

Intervention groups

1

Description

For 21 patients, a tourniquet is placed on a patient's arm at the level of the mid biceps. Then the traditional IV-line access will be done.

Category

Diagnosis

2

Description

For 21 patients, a tourniquet is placed on a patient's arm at the level of the mid biceps. Then the ultrasound-guided peripheral intravenous access will be done.

Category

Diagnosis

Recruitment centers

1

Recruitment center

Name of recruitment center

Emergency unit, Rasoul hospital

Full name of responsible person

Dr. Bahareh Gharehkhanelou

Street address

Rasoul hospital, Sattar Khan Str., Tehran

City

Tehran

2

Recruitment center

Name of recruitment center

Emergency unit, Haft-e-tir hospital

Full name of responsible person

Dr. Bahareh Gharehkhanelou

Street address

Haft-e-tir hospital, Shahr-e-rey, Tehran

City

Tehran

Sponsors / Funding sources

1

Sponsor

Name of organization / entity

Iran University of Medical Sciences

Full name of responsible person

Dr. Mehrdad Eftekhari

Street address

Hemmat highway

City

Tehran

Grant name

Grant code / Reference number

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

Yes

Title of funding source

Iran 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

Iran University of Medical Sciences

Full name of responsible person

Dr. Bahareh Gharehkhanelou

Position

Resident of Emergency Medicine

Other areas of specialty/work

Street address

Hemat Highway

City

Tehran

Postal code

Phone

+98 21 4465 7807

Fax

Email

b.gharehkhanelou@gmail.com

Web page address

Person responsible for scientific inquiries

Contact

Name of organization / entity

Tehran University of Medical Sciences

Full name of responsible person

Dr. Davood Farsi

Position

Specialist of Emergency Medicine

Other areas of specialty/work

Street address

Tehran University of Medical Sciences

City

Tehran

Postal code

Phone

+98 21 6652 5327

Fax

Email

davoodfa@2004yahoo.com

Web page address

Person responsible for updating data

Contact

Name of organization / entity

Iran University of Medical Sciences

Full name of responsible person

Dr. Bahareh Gharehkhanelou

Position

Resident of Emergency Medicine

Other areas of specialty/work

Street address

Hemmat Highway

City

Tehran

Postal code**Phone**

00

Fax**Email**

b.gharehkhanelou@gmail.com

Web page address**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