

# Clinical Trial Protocol

## Iranian Registry of Clinical Trials

21 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//ۛ

**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*