Clinical Trial Protocol
Iranian Registry of Clinical Trials

22 Nov 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

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Iran (Islamic Republic of)

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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//د

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 Gharehkhanlou
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 Gharehkhanlou
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 Eftekhar
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
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Person responsible for scientific inquiries

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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