

Clinical Trial Protocol

Iranian Registry of Clinical Trials

28 Jun 2026

Comparison of peripheral venous cannulation success rate with ultrasonography or direct vision in children under 5 years

Protocol summary

Summary

We sought to determine if the use of a static ultrasound technique could, a) allow clinicians to visualize peripheral veins and b) improve success rates of peripheral venous cannulation in young children in the pediatric patients. We will perform a randomized clinical trial of 70 children less than 5 years old by physical status with ASA I and ASA II in an academic pediatric hospital who will be required IV access. We'll be randomized patients to either continued standard IV attempts. In the ultrasound group, great saphenous vein localization will be performed by a physician. Patients who had multiple attempts to IV accessing or had scar in IV access localization will be excluded. Intravenous cannulation attempts will be performed by the anesthesiologist who have transverse view on target vessel location by ultrasonography. In second group intravenous cannulation attempts will be performed by the same anesthesiologist who have direct view on anatomical signs for standard IV access. We will record success rate in first try. We will compare group success rates using differences in 95% confidence intervals.

General information

Acronym

IRCT registration information

IRCT registration number: **IRCT201501304041N9**
Registration date: **2015-04-23, 1394/02/03**
Registration timing: **registered_while_recruiting**

Last update:

Update count: **0**

Registration date

2015-04-23, 1394/02/03

Registrant information

Name

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Name of organization / entity

Tabriz University of Medical Sciences

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Recruitment status

Recruitment complete

Funding source

Tabriz University of Medical Sciences

Expected recruitment start date

2014-03-21, 1393/01/01

Expected recruitment end date

2015-06-21, 1394/03/31

Actual recruitment start date

empty

Actual recruitment end date

empty

Trial completion date

empty

Scientific title

Comparison of peripheral venous cannulation success rate with ultrasonography or direct vision in children under 5 years

Public title

ultrasonography for peripheral venous cannulation

Purpose

Treatment

Inclusion/Exclusion criteria

inclusion criteria : physical status with ASA I and ASA II ; age less than 5 years old ; candidate to surgery procedure less than 1 hour. exclusion criteria : patients who had multiple attempts to IV accessing ; had scar in IV access localization.

Age

To 5 years old
Gender
Both
Phase
N/A
Groups that have been masked
No information
Sample size
Target sample size: 70
Randomization (investigator's opinion)
Randomized
Randomization description
Blinding (investigator's opinion)
Double blinded
Blinding description
Placebo
Not used
Assignment
Parallel
Other design features

Secondary Ids

empty

Ethics committees

1

Ethics committee

Name of ethics committee

Ethics committee of Tabriz University of Medical Sciences

Street address

Ethic committee of university, Research Vice chancellor of Tabriz University of Medical Sciences , Tabriz University of Medical Sciences, Daneshgah Street, Tabriz.Iran

City

Tabriz

Postal code

5166614711

Approval date

2014-02-12, 1392/11/23

Ethics committee reference number

931

Health conditions studied

1

Description of health condition studied

anesthesia for surgery

ICD-10 code

K40.2

ICD-10 code description

Bilateral inguinal hernia, without obstruction or gangrene

Primary outcomes

1

Description

success rate in first try

Timepoint

after success iv access

Method of measurement

questionnaires

Secondary outcomes

empty

Intervention groups

1

Description

ultrasonography

Category

Treatment - Other

2

Description

classic method

Category

Treatment - Other

Recruitment centers

1

Recruitment center**Name of recruitment center**

Tabriz Children's Hospital

Full name of responsible person

Alireza Hatami

Street address

Tabriz Children's Hospital, Sheshgelan street, Tabriz, Iran

City

Tabriz

Sponsors / Funding sources

1

Sponsor**Name of organization / entity**

Tabriz University of Medical Sciences

Full name of responsible person

Dr Hasan Soleimanpour

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Golgasht Ave- Tabriz University of Medical Sciences

City

Tabriz

Grant name**Grant code / Reference number****Is the source of funding the same sponsor organization/entity?**

Yes

Title of funding source

Tabriz 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**

Tabriz University of Medical Sciences

Full name of responsible person

Alireza Hatami

Position

student

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Professor

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Position

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Other areas of specialty/work**Street 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*