

Clinical Trial Protocol

Iranian Registry of Clinical Trials

04 Aug 2026

Effect of Near Infrared Vein Finder Technology on Successful rate of Cannulation in Obese Diabetic Patients

Protocol summary

Study aim

To determine the effect of Near-Infrared Vein Finder Technology successful rate of cannulation in obese diabetic patients.

Design

A randomized control trail design with concurrent control group

Settings and conduct

In the intervention group, the patient lies on his back on the bed and the sleeves of his clothes are raised. The device is then turned on and the vessels of the patient's hand are examined, The time will be calculated from turning on until the catheter is inserted into the vessel successfully. If not successful, the venipuncture will be repeated. If the venipuncture fails up to 4 times, the patient will be excluded from the study. In the control group, venipuncture for the patient will be performed routinely by the same nurse in the intervention group. The duration of venous cannulation is considered from the time of tying the tourniquet.

Participants/Inclusion and exclusion criteria

Inclusion criteria: At least two months have passed since the diabetic type 2, Body mass index 30 and above, Having patients' informed consent, Age between 18-70 years, No history of vein problems, Not having vein problems such as phlebitis and extremities edema. Exclusion criteria: Reluctance to continue participating in the study, Exacerbation of the disease or occurrence of an unpleasant accident for the patient such as severe hemorrhage and hematoma, Failing insertion of cannula at more than fourth attempt .

Intervention groups

In the intervention group, an infrared vein finder will be used to find the patient's upper extremity veins.

Main outcome variables

The number of attempts and the procedural time of cannulation

General information

Reason for update

Acronym

IRCT registration information

IRCT registration number: **IRCT20210705051797N1**

Registration date: **2021-08-05, 1400/05/14**

Registration timing: **prospective**

Last update: **2021-08-05, 1400/05/14**

Update count: **0**

Registration date

2021-08-05, 1400/05/14

Registrant information

Name

Saeb Al-Saadi

Name of organization / entity

Country

Iran (Islamic Republic of)

Phone

+98 51 3859 1511

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alsaedis982@mums.ac.ir

Recruitment status

Recruitment complete

Funding source

Expected recruitment start date

2021-08-23, 1400/06/01

Expected recruitment end date

2021-10-23, 1400/08/01

Actual recruitment start date

empty

Actual recruitment end date

empty

Trial completion date

empty

Scientific title

Effect of Near Infrared Vein Finder Technology on Successful rate of Cannulation in Obese Diabetic Patients		City	Mashhad
Public title		Province	Razavi Khorasan
Effect of using infrared vein finder on the success rate of venipuncture in obese diabetic patients		Postal code	9137913199
Purpose		Approval date	2021-07-06, 1400/04/15
Health service research		Ethics committee reference number	IR.MUMS.NURSE.REC.1400.037
Inclusion/Exclusion criteria		Health conditions studied	
Inclusion criteria:		<u>1</u>	
Diagnose diabetes for at least two months Body mass index 30 and above Having patients' informed consent Age between 18-70 years No history of vein problems Not having vein problems such as phlebitis and extremities edema		Description of health condition studied	
Exclusion criteria:		Obese Diabetic Patients	
Reluctance to continue participating in the study Exacerbation of the disease or occurrence of an unpleasant accident for the patient such as severe hemorrhage and hematoma Failing insertion of cannula at more than fourth attempt		ICD-10 code	
Age		E11.69	
From 18 years old to 70 years old		ICD-10 code description	
Gender		Type 2 diabetes mellitus with other specified complication	
Both		Primary outcomes	
Phase		<u>1</u>	
N/A		Description	
Groups that have been masked		the number of attempts of cannulation	
No information		Timepoint	
Sample size		during the study	
Target sample size: 66		Method of measurement	
Randomization (investigator's opinion)		Counting the number of times that catheter is inserted into the patient's skin.	
Randomized		<u>2</u>	
Randomization description		Description	
The samples are selected based on the inclusion criteria and then randomly assigned to the intervention or control group by coin lottery.		Duration of catheter insertion	
Blinding (investigator's opinion)		Timepoint	
Not blinded		duration of the study	
Blinding description		Method of measurement	
Placebo		Measure the time required for catheter insertion using a watch	
Not used		Secondary outcomes	
Assignment		<u>1</u>	
Parallel		Description	
Other design features		no having	
		Timepoint	
		no having	
		Method of measurement	
		no having	
Secondary Ids		Intervention groups	
empty		<u>1</u>	
Ethics committees		Description	
<u>1</u>			
Ethics committee			
Name of ethics committee			
Ethics Committee of Mashhad University of Medical Sciences			
Street address			
Department of Medical Surgical Nursing, Nursing and Midwifery School, Doctora Croddroad, Daneshgah Street, Mashhad, Iran			

In the intervention group, an infrared vein finder will be used to examine the patient's veins and catheter insertion.

Category

Prevention

2

Description

In the control group, routine procedures are used for catheter insertion and no vein finder will be used.

Category

N/A

Recruitment centers

1

Recruitment center

Name of recruitment center

Al-Kindy hospital

Full name of responsible person

Saeb Al-Saadi

Street address

Al-Nahdha

City

Baghdad

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saebalsaadi927@gmail.com

Sponsors / Funding sources

1

Sponsor

Name of organization / entity

Mashhad University of Medical Sciences

Full name of responsible person

Dr. Mohsen tafaghodi

Street address

Danshgah Street/ Doctora crossroad

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Mashhad

Province

Razavi Khorasan

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9138813944

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tafaghodiM@mums.ac.ir

Grant name

Grant code / Reference number

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

No

Title of funding source

Vice Chancellor for Research, Mashhad University of Medical Sciences

Proportion provided by this source

100

Public or private sector

Public

Domestic or foreign origin

Domestic

Category of foreign source of funding

Sponsor: country of origin

Country of origin

IQ

Type of organization providing the funding

Academic

Person responsible for general inquiries

Contact

Name of organization / entity

Mashhad University of Medical Sciences

Full name of responsible person

Professor; Hossein Karimi Moonaghi, PhD.

Position

Professor

Latest degree

Ph.D.

Other areas of specialty/work

Nursing

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Person responsible for scientific inquiries

Contact

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Full name of responsible person

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Position

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Other areas of specialty/work

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Person responsible for updating data

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Sharing plan

Deidentified Individual Participant Data Set (IPD)

Yes - There is a plan to make this available

Study Protocol

Yes - There is a plan to make this available

Statistical Analysis Plan

Yes - There is a plan to make this available

Informed Consent Form

Yes - There is a plan to make this available

Clinical Study Report

Yes - There is a plan to make this available

Analytic Code

Yes - There is a plan to make this available

Data Dictionary

Not applicable

Title and more details about the data/document

The researcher is acknowledging the scientific community to have verifiable findings of the study. sharing plan includes making all the related data available through publishing the study report in peer-reviewed reputable journals.

When the data will become available and for how long

God willing, once finishing the process of data collection, analysis and successfully publishing the manuscript, all the related files will become available for 6 months after publications.

To whom data/document is available

All the related files will be shared with any scientific interested parties.

Under which criteria data/document could be used

It may be used after seeking the author's permission and acknowledging his contribution.

From where data/document is obtainable

The author's professional e-mail that will be available with the published manuscript can be used to contact the author. e-Mail: saebalsaadi927@gmail.com

What processes are involved for a request to access data/document

N/A

Comments

Profound appreciations are due to the IRCT members for their genuine efforts in helping researchers fulfilling their academic endeavors.