

# Clinical Trial Protocol

## Iranian Registry of Clinical Trials

01 Jul 2026

### Investigation of metabolic and hemodynamic change after using tourniquet in upper extremity surgery to release contracture after burn injury

#### Protocol summary

mohamadiaa@sums.ac.ir

##### Summary

The objective of present study is to investigate metabolic and hemodynamic change after using tourniquet in upper extremity surgery for release contracture after burn injury. 20 patients, aged 13-60 years with upper extremity burn, scheduled for upper extremity surgery due to burn contracture and need tourniquet application are included in this study. Two venous catheters (one proximal to tourniquet and the other in contralateral arm) will be inserted. PH, po<sub>2</sub>, Hco<sub>3</sub>, lactate, blood pressure, and heart rate will be measured 10 seconds and also 1, 3, and 5 minutes after opening of the tourniquet.

##### Recruitment status

**Recruitment complete**

##### Funding source

Vice chancellor for Research

##### Expected recruitment start date

2010-01-01, 1388/10/11

##### Expected recruitment end date

2011-01-01, 1389/10/11

##### Actual recruitment start date

empty

##### Actual recruitment end date

empty

##### Trial completion date

empty

#### General information

##### Acronym

##### IRCT registration information

IRCT registration number: **IRCT138811271605N8**

Registration date: **2010-05-15, 1389/02/25**

Registration timing: **registered\_while\_recruiting**

Last update:

Update count: **0**

##### Registration date

2010-05-15, 1389/02/25

##### Registrant information

###### Name

Ali Akbar Mohammadi

###### Name of organization / entity

Shiraz University of Medical Sciences

###### Country

Iran (Islamic Republic of)

###### Phone

+98 71 1621 6097

###### Email address

##### Scientific title

Investigation of metabolic and hemodynamic change after using tourniquet in upper extremity surgery to release contracture after burn injury

##### Public title

Investigation of metabolic and hemodynamic change after using tourniquet in upper extremity surgery to release contracture after burn injury

##### Purpose

Diagnostic

##### Inclusion/Exclusion criteria

Inclusion criteria: Age 13-60, upper extremity burn, candidate to surgery due to burn complication using tourniquet for 30 to 60 minutes during surgery Exclusion criteria: presence of open wound in other sites of body, cardio vascular disease, patients under drug treatments

##### Age

From **13 years** old to **60 years** old

##### Gender

Both

## Phase

N/A

## Groups that have been masked

No information

## Sample size

Target sample size: 20

## Randomization (investigator's opinion)

N/A

## Randomization description

## Blinding (investigator's opinion)

Not blinded

## Blinding description

## Placebo

Not used

## Assignment

Single

## Other design features

## Secondary Ids

empty

## Ethics committees

### 1

#### Ethics committee

##### Name of ethics committee

Shiraz University of Medical Sciences

##### Street address

Shiraz University of Medical Sciences, Zand Blvd.

##### City

Shiraz

##### Postal code

#### Approval date

empty

#### Ethics committee reference number

4848-88-CT

## Health conditions studied

### 1

#### Description of health condition studied

hemodynamic change

#### ICD-10 code

R09.8

#### ICD-10 code description

Other specified symptoms and signs involving the circulatory and respiratory systems

### 2

#### Description of health condition studied

metabolic change

#### ICD-10 code

E88.9

#### ICD-10 code description

Metabolic disorder, unspecified

## Primary outcomes

### 1

#### Description

Arterial blood PH

#### Timepoint

10 second, 1, 3, and 5 minutes after opening tourniquet

#### Method of measurement

blood gas instrument

### 2

#### Description

Arterial PO2

#### Timepoint

10 second, 1, 3, and 5 minutes after opening tourniquet

#### Method of measurement

blood gas instrument

### 3

#### Description

Serum lactate

#### Timepoint

10 second, 1, 3, and 5 minutes after opening tourniquet

#### Method of measurement

blood gas instrument

### 4

#### Description

Serum bicarbonate

#### Timepoint

before opening of tourniquet, 10 seconds, 1, 3, and 5 minutes after opening tourniquet

#### Method of measurement

blood gas instrument

### 5

#### Description

blood pressure

#### Timepoint

before opening of tourniquet, 10 seconds, 1, 3, and 5 minutes after opening tourniquet

#### Method of measurement

by sphyngomanometer

### 6

#### Description

heart rate

#### Timepoint

before opening of tourniquet, 10 seconds, 1, 3, and 5 minutes after opening tourniquet

#### Method of measurement

by checking heart bit in a minute

## Secondary outcomes

empty

## Intervention groups

1

### Description

using tourniquet for 30 to 60 minutes

### Category

Other

## Recruitment centers

1

### Recruitment center

#### Name of recruitment center

Ghotb-eddin Burn Center

#### Full name of responsible person

Ali Akbar Mohammadi

#### Street address

#### City

Shiraz

## Sponsors / Funding sources

1

### Sponsor

#### Name of organization / entity

Vice-chancellor for Research

#### Full name of responsible person

Mohammad Hossein Dabbaghmanesh

#### Street address

Vice-chancellor of Research, Shiraz University of Medical Sciences

#### City

Shiraz

### Grant name

### Grant code / Reference number

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

Yes

### Title of funding source

Vice-chancellor for Research

### 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

Shiraz University of Medical Sciences

#### Full name of responsible person

Ali Akbar Mohammadi

#### Position

Assistant Professor, General Surgeon

#### Other areas of specialty/work

#### Street address

Burn research center, Fakhrcabad Street, Shiraz

#### City

Shiraz

#### Postal code

#### Phone

+98 71 1821 9638

#### Fax

#### Email

mohamadiaa@sums.ac.ir

#### Web page address

## Person responsible for scientific inquiries

### Contact

#### Name of organization / entity

Shiraz University of Medical Sciences, Burn reaserch center

#### Full name of responsible person

Ali akbar Mohammadi

#### Position

Assistant Professor, General Surgeon

#### Other areas of specialty/work

#### Street address

Burn reaserch center, Fakhrcabad Street, Shiraz,

#### City

Shiraz

#### Postal code

#### Phone

+98 71 1821 9638

#### Fax

#### Email

mohamadiaa@sums.ac.ir

#### Web page address

## Person responsible for updating data

### Contact

#### Name of organization / entity

Shiraz University of Medical Sciences, Burn reaserch center

#### Full name of responsible person

Masoomeh Kherad

#### Position

Manager of Shiraz Burn Reaserch Center/Nurse

#### Other areas of specialty/work

#### Street address

Fakhrcabad St., Ghotbeddin Hospital, Shiraz Burn Reaserch Center

#### City

Shiraz

#### Postal code

#### Phone

+98 71 1820 8880

#### Fax

#### Email

burnres1@sums.ac.ir

**Web page address**  
www.burnres.sums.ac.ir

## 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*