Clinical Trial Protocol
Iranian Registry of Clinical Trials

16 Sep 2026

Comparison of early and late upper extremity reconstruction in high voltage electrical burn

Protocol summary

Summary

Electrical burn is devastating injury in developing country that usually we loss the extremity and decrease the quality of life. Incidence in developed country is 2-3 % and in developing country is21-27%.in electrical burn the pathophysiology is different from other and is very complicated. We have some challenge such as necrosis; ischemia; infection; thrombosis; and so on. We must be careful to preserve the extremity. From 1986 early reconstruction reported but this procedure is new and need more study. This study performed to compare early and late upper extremity reconstruction in high voltage electrical burn. The type of study is clinical trial with intervention and control group. In intervention group, early reconstruction is performed while in control group, conventional treatment include wound debridement and excision and control until granulation formation and regular dressing. Inclusion criteria were electrical burn with more than 1000 volts that leads to vital organ injury included nerves, vessels, tendons, skeletal and articular structures like a open wound in upper and lower extremities and followed with skin, fascia, subcutaneous fat tissue and muscle loss. Exclusion criteria were inability to grafting or graft replacement on wound due to electrical injury, vital conditions instability and coagulopathy. The main outcome of study is organ function.

General information

Acronym

IRCT registration information

IRCT registration number: **IRCT2012112611576N1**
Registration date: **2013-09-03, 1392/06/12**
Registration timing: **retrospective**

Last update:
Update count: **0**

Registration date

2013-09-03, 1392/06/12

Registrant information

Name

Ahmad Reza Dayani

Name of organization / entity

Tehran University of Medical Sciences

Country

Iran (Islamic Republic of)

Phone

+98 912 283 5743

Email address

drahmaddayan@yahoo.com

Recruitment status

Recruitment complete

Funding source

Terhan University of Medical Sciencs

Expected recruitment start date

2012-12-22, 1391/10/02

Expected recruitment end date

2013-06-19, 1392/03/29

Actual recruitment start date

empty

Actual recruitment end date

empty

Trial completion date

empty

Scientific title

Comparison of early and late upper extremity reconstruction in high voltage electrical burn

Public title

Comparison of early and late upper extemitty reconstruction in high voltage electrical burn

Purpose

Treatment

Inclusion/Exclusion criteria

Inclusion criteria were electrical burn with more than

1000 volts that leads to vital organ injury included nerves, vessels, tendons, skeletal and articular structures like a open wound in upper and lower extermities and followed with skin, fascia, subcutaneous fat tissue and muscle loss. Exclusion criteria were inability to grafting or graft replacement on wound due to electrical injury, vital conditions instability and coagulopathy.

Age
From **15 years** old to **60 years** old

Gender
Both

Phase
N/A

Groups that have been masked
No information

Sample size
Target sample size: **40**

Randomization (investigator's opinion)
Not 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
Tehran University of Medical Sciences Ethics Committee

Street address
6th floor; Central building of Tehran University of Medical Sciences, Ghods st., Keshavarze blv.

City
Tehran

Postal code

Approval date
2012-09-22, 1391/07/01

Ethics committee reference number
67666

Health conditions studied

1

Description of health condition studied
Electrical injury, burn

ICD-10 code

ICD-10 code description

Primary outcomes

1

Description
Early reconstruction

Timepoint
After 2 weeks; 3 & 6 mo

Method of measurement
Clinical examination

Secondary outcomes

1

Description
Organ function

Timepoint
After 2weeks; 3& 6 mo

Method of measurement
Clinical examination

Intervention groups

1

Description
Early reconstruction of high voltage electrical burns of upper limbs

Category
Treatment - Surgery

2

Description
In control group: conventional treatment of electrical burn included wound debridment and excision and control until granulation formation and regular pancemant

Category
Treatment - Surgery

Recruitment centers

1

Recruitment center

Name of recruitment center
Shahid Motahari burn hospital

Full name of responsible person
Dr Ahmad Reza Dayani

Street address
Shahid Motahari burn hospital, Yazdani st., Valiasr st., Vanak sequare

City
Tehran

Sponsors / Funding sources

1

Sponsor

Name of organization / entity

Tehran University of Medical Sciences

Full name of responsible person

Dr Akbar Fotoohi

Street address

Sixth floor; Central building of Tehran University of Medical Sciences, Ghods st., Keshavarze blv.

City

Tehran

Grant name

Grant code / Reference number

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

Yes

Title of funding source

Tehran 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

Tehran University of Medical Sciences

Full name of responsible person

Dr Ahmad Reza Dayani

Position

Plastic & reconstructive & burn resident

Other areas of specialty/work

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Person responsible for scientific inquiries

Contact

Name of organization / entity

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Associate professor

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Other areas of specialty/work

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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