

Clinical Trial Protocol

Iranian Registry of Clinical Trials

04 Jul 2026

A comparison between outcomes of simple suture and vertical mattress suture in elective incisions of palmar hand; A prospective clinical trial

Protocol summary

Study aim

Comparison of the effect of using simple and vertical mattress suture on palmar elective incisions in terms of: Cosmetic, complications, patient satisfaction and functional outcome.

Design

Parallel clinical trial with two groups and a sample size of 60 cases, randomized using <https://www.graphpad.com/quickcalcs/randMenu/>

Settings and conduct

Candidate patients for carpal tunnel syndrome surgery, trigger finger surgery and trigger thumb surgery referred to Shahid Sadoughi and Shahid Rahnemoun Hospitals in Yazd, entered the study according to inclusion criteria and after obtaining informed consent randomly assigned to one of the groups simple suture or vertical mattress suture and are evaluated at specified intervals after the intervention.

Participants/Inclusion and exclusion criteria

Inclusion criteria: Patients undergoing elective surgery to release the carpal tunnel, trigger finger, and trigger thumb also have the ability to complete follow-up.
Exclusion criteria: Previous history of Palmar surgery, hand diseases (Dupuytren, rheumatoid arthritis), vascular disorders, systemic diseases (diabetes, rheumatic diseases, malignancies, kidney failure), skin diseases (eczema, psoriasis), sensitivity to suture material, Using of Corticosteroid and cytotoxic drugs, pregnancy, previous history of keloid and hypertrophic scars.

Intervention groups

One group of patients undergoes simple sutures and the other group undergoes vertical mattress sutures.

Main outcome variables

Cosmetic, complications, patient satisfaction and functional outcome

General information

Reason for update

Acronym

IRCT registration information

IRCT registration number: **IRCT20180627040252N2**

Registration date: **2021-09-12, 1400/06/21**

Registration timing: **registered_while_recruiting**

Last update: **2021-09-12, 1400/06/21**

Update count: **0**

Registration date

2021-09-12, 1400/06/21

Registrant information

Name

Abbas Abdoli Tafti

Name of organization / entity

Country

Iran (Islamic Republic of)

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+98 35 3522 2304

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Recruitment status

Recruitment complete

Funding source

Expected recruitment start date

2020-02-20, 1398/12/01

Expected recruitment end date

2021-09-22, 1400/06/31

Actual recruitment start date

empty

Actual recruitment end date

empty

Trial completion date

empty

Scientific title

A comparison between outcomes of simple suture and vertical mattress suture in elective incisions of palmar hand; A prospective clinical trial

Public title

A comparison between outcomes of simple suture and vertical mattress suture in palmar incisions

Purpose

Treatment

Inclusion/Exclusion criteria

Inclusion criteria:

Candidate patients for open carpal tunnel release surgery at the surgeon's discretion Candidate patients for trigger finger release surgery at the surgeon's discretion Candidate patients for trigger thumb release surgery at the surgeon's discretion Ability to complete subsequent follow ups Patients with informed consent

Exclusion criteria:

Previous history of Palmar surgery Hand Diseases (Dupuytren, Rheumatoid Arthritis) Vascular disorders Systemic diseases (diabetes, rheumatic diseases, malignancies, kidney failure) Skin diseases (eczema, psoriasis) Sensitivity to suture material Use of corticosteroid and cytotoxic drugs Pregnancy Previous history of keloid and hypertrophic scars

Age

No age limit

Gender

Both

Phase

N/A

Groups that have been masked

No information

Sample size

Target sample size: 60

Randomization (investigator's opinion)

Randomized

Randomization description

The site: <https://www.graphpad.com/quickcalcs/randMenu/> is used for randomization. The samples are divided into two random groups based on random numbers created by the site. The letter A is considered for the simple suture group and the letter B is considered for the vertical mattress suture group.

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

Research Ethics Committees of School of Medicine-Shahid Sadoughi University of Medical Sciences

Street address

Bahonar Square

City

Yazd

Province

Yazd

Postal code

8916978477

Approval date

2020-02-25, 1398/12/06

Ethics committee reference number

IR.SSU.MEDICINE.REC.1398.352

Health conditions studied

1

Description of health condition studied

Carpal tunnel syndrome

ICD-10 code

G56.0

ICD-10 code description

Carpal tunnel syndrome

2

Description of health condition studied

Trigger finger

ICD-10 code

M65.3

ICD-10 code description

Trigger finger

3

Description of health condition studied

Trigger thumb

ICD-10 code

M65.31

ICD-10 code description

Trigger thumb

Primary outcomes

1

Description

Cosmetic

Timepoint

Third month

Method of measurement

Patient and Observer Scar Assessment Scale

2

Description

Pain

Timepoint

Third day, third week, third month

Method of measurement

Visual Analogue Scale

3**Description**

Infection

Timepoint

Third day, third week

Method of measurement

Southampton Wound Assessment Scale

4**Description**

Patient satisfaction

Timepoint

Third month

Method of measurement

Visual Analogue Scale

5**Description**

Functional outcome

Timepoint

Third month

Method of measurement

Shortened version of the disabilities of the arm, hand and shoulder Score

Secondary outcomes

empty

Intervention groups**1****Description**

Control group: In this group, patients undergoing carpal tunnel release surgery, trigger finger release and trigger thumb release are sutured with simple sutures. In simple suture, the needle is inserted from a distance of 3-5 mm from one edge of the wound and leaves the other edge of the wound at the same distance. Then a knot is secured. In this group, 4-0 nylon suture is used for skin closure.

Category

Treatment - Surgery

2**Description**

Intervention group: In this group, patients undergoing carpal tunnel release surgery, trigger finger release and trigger thumb release are sutured with vertical mattress sutures. In vertical mattress suture, the needle is inserted 4-8mm from the wound edge and a deep bite of tissue is taken before exiting the skin in the same position on the opposite wound edge. Then, the needle

position is reversed in the needle holder, and the needle is inserted 1-2mm from the second side of the wound and a smaller bite of tissue is taken before exiting on the first side of the wound. Then a knot is secured. In this group, 4-0 nylon suture is used for skin closure.

Category

Treatment - Surgery

Recruitment centers**1****Recruitment center****Name of recruitment center**

Shahid Sadoughi Hospital

Full name of responsible person

Dr Abbas Abdoli

Street address

Shahid Sadoughi Hospital, Ebne Sina Street, Shahid Ghandi Blvd

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2**Recruitment center****Name of recruitment center**

Shahid Rahnemoun Hospital

Full name of responsible person

Dr Hosein Saeed

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Sponsors / Funding sources**1****Sponsor****Name of organization / entity**

Yazd University of Medical Sciences

Full name of responsible person

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

No

Title of funding source

Shahid Sadoughi 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*empty***Country of origin****Type of organization providing the funding**

Academic

Person responsible for general inquiries**Contact****Name of organization / entity**

Yazd University of Medical Sciences

Full name of responsible person

Abbas Abdoli Tafti

Position

Assistant professor

Latest degree

Subspecialist

Other areas of specialty/work

Hand Surgery

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Person responsible for scientific inquiries**Contact****Name of organization / entity**

Yazd University of Medical Sciences

Full name of responsible person

Abbas Abdoli Tafti

Position

Assistant professor

Latest degree

Subspecialist

Other areas of specialty/work

Hand Surgery

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Person responsible for updating data**Contact****Name of organization / entity**

Yazd University of Medical Sciences

Full name of responsible person

Milad Gholizadeh

Position

Medical Intern

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Medical doctor

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Sharing plan**Deidentified Individual Participant Data Set (IPD)**

Undecided - It is not yet known if there will be a plan to make this available

Study Protocol

Undecided - It is not yet known if there will be a plan to make this available

Statistical Analysis Plan

Undecided - It is not yet known if there will be a plan to make this available

Informed Consent Form

Undecided - It is not yet known if there will be a plan to make this available

Clinical Study Report

Undecided - It is not yet known if there will be a plan to make this available

Analytic Code

Undecided - It is not yet known if there will be a plan to

make this available

Data Dictionary

Undecided - It is not yet known if there will be a plan to make this available