Clinical Trial Protocol
Iranian Registry of Clinical Trials

16 Sep 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)

Phone

+98 35 3522 2304

Email address

aabdoli2000@mail.ssu.ac.ir

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
City
Yazd
Province
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Postal code
8915887856
Phone
+98 35 3183 3550
Email
info@ssu.ac.ir

2

Recruitment center
Name of recruitment center
Shahid Rahnemoun Hospital
Full name of responsible person
Dr Hosein Saeed
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8913814396
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Email
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Sponsors / Funding sources

1

Sponsor
Name of organization / entity
Yazd University of Medical Sciences
Full name of responsible person
Masoud Mirzaei
Street address
Bahonar Square

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Postal code
8916978477
Phone
+98 35 3726 3733
Email
mmirzaei@ssu.ac.ir
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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Shahid Sadougi Hospital, Ebne Sina street, Shahid Ghandi BLvd
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Person responsible for scientific inquiries

Contact
Name of organization / entity
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Full name of responsible person
Abbas Abdoli Tafti
Position
Assistant professor
Latest degree
Subspecialist
Other areas of specialty/work
Hand Surgery
Street address
Shahid Sadougi Hospital, Ebne Sina street, Shahid Ghandi BLvd
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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
Latest degree
Medical doctor
Other areas of specialty/work
General Practitioner
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miladghz15255@gmail.com

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