Clinical Trial Protocol
Iranian Registry of Clinical Trials

22 Nov 2026

Effects of Instrument-Assisted soft tissue mobilization (IASTM) and myofascial release (MFR) in alleviating post-surgical elbow stiffness

Protocol summary

Study aim
This study aims to evaluate the efficacy of myofascial release and instrument-assisted soft tissue mobilization (IASTM) in reducing pain, stiffness, and range of motion associated with post-surgical elbow stiffness.

Design
Randomized clinical trial, single blinded, parallel group, sample size 24

Settings and conduct
Ahmad Poly Care Clinic, Faisalabad (APCC) , Allied Hospital, Faisalabad (AHF)

Participants/Inclusion and exclusion criteria
Inclusion criteria: Male and female , Age 8-40 years, ROM of elbow extension ≥–30 degrees & flexion ≤120 degrees, At least six weeks following surgery, with internal fixation and open reduction. Exclusion Criteria: Participants with any diagnosed auto-immune disorder,Pathological fractures, associated ipsilateral injuries,Injury to both upper limbs, Neuro-vascular disorders, IASTM contraindications (according to the IASTM guidelines), Rheumatic conditions, Circulatory disorders or diabetes.

Intervention groups
Baseline Treatment Both groups received conventional treatments, which included a 5- to 10-minute warm-up with active range-of-motion exercises for the shoulder, elbow, and wrist, gentle passive stretching with 30-second holds for three repetitions, and progressive low-load strengthening activities (for the major upper limb muscle groups). Group A Group A was administered IASTM therapy by means of the “S-shape tool,” an ergonomic stainless-steel instrument with multiple hand grips that reduce operator fatigue. . Group B Group B received myofascial release technique was given. Myofascial release treatment is a kind of continuous, mild massage that helps your myofascial tissues become less painful and tense. Group C Group C received both Instrument-assisted soft tissue mobilization (IASTM) and Myofascial release technique (MFR) to check the effect of both treatments collectively.

Main outcome variables
Pain, Range of motion, Functional disability

General information

Reason for update

Acronym
IASTM , MFR

IRCT registration information
IRCT registration number: **IRCT20210528051415N1**
Registration date: **2024-07-28, 1403/05/07**
Registration timing: **retrospective**

Last update: **2024-07-28, 1403/05/07**
Update count: **0**

Registration date
2024-07-28, 1403/05/07

Registrant information

Name
Shaheer Masood

Name of organization / entity
The University of Faisalabad, Faisalabad, Pakistan

Country
Pakistan

Phone
+92 41 8750274

Email address
shaheer_masood@hotmail.com

Recruitment status
Recruitment complete

Funding source

Expected recruitment start date
2024-02-17, 1402/11/28

Expected recruitment end date
2024-03-16, 1402/12/26

Actual recruitment start date

2024-02-17, 1402/11/28

Actual recruitment end date

2024-03-16, 1402/12/26

Trial completion date

2024-05-31, 1403/03/11

Scientific title

Effects of Instrument-Assisted soft tissue mobilization (IASTM) and myofascial release (MFR) in alleviating post-surgical elbow stiffness

Public title

How IASTM and Myofascial Release Alleviate Post-Surgical Elbow Stiffness"

Purpose

Treatment

Inclusion/Exclusion criteria

Inclusion criteria:

Male and female Age: 8–40 years ROM of elbow extension ≥–30 degrees & flexion ≤120 degrees Least 6-week post-surgery with open reduction and internal fixation Patient with U/L or B/L post-surgical elbow stiffness Willing to participate were included in this study

Exclusion criteria:

Participants with any diagnosed auto-immune disorder Pathological fractures, associated ipsilateral injuries Bilateral upper extremity injuries Neuro-vascular disorders Contraindications for IASTM (as per the IASTM guidelines) Rheumatic conditions Circulatory disorders or diabetes Pregnancy Inability to Follow Rehabilitation Protocols

Age

From **8 years** old to **40 years** old

Gender

Both

Phase

3

Groups that have been masked

- Outcome assessor

Sample size

Target sample size: **24**

Actual sample size reached: **24**

Randomization (investigator's opinion)

Randomized

Randomization description

The randomization will be done with the help of the lottery method. With a lottery method, each member of the population is assigned a number, after which numbers are selected at random

Blinding (investigator's opinion)

Single blinded

Blinding description

Single blinded: outcomes accessors were kept unaware of which participants received the experimental treatment and which received a comparative intervention. This blinding helps to prevent conscious and unconscious biases that could influence the assessment of study outcome.

Placebo

Not used

Assignment

Parallel

Other design features

Secondary Ids

empty

Ethics committees

1

Ethics committee

Name of ethics committee

Research and ethics/ technical committee for The University of Faisalabad

Street address

Faisal town, west canal road, Faisalabad, Punjab.

City

Faisalabad

Postal code

38000

Approval date

2024-01-05, 1402/10/15

Ethics committee reference number

TUF/Addl Reg/SB/785

Health conditions studied

1

Description of health condition studied

Post surgical elbow stiffness

ICD-10 code

M25.62

ICD-10 code description

Stiffness of elbow, not elsewhere classified

Primary outcomes

1

Description

Range of motion

Timepoint

Baseline intervention and 3 weeks post intervention

Method of measurement

Goniometer

2

Description

Pain

Timepoint

Baseline intervention and 3 weeks post intervention

Method of measurement

Numeric pain rating scale

Secondary outcomes

1

Description
Functional Disability
Timepoint
Baseline intervention and 3 weeks post intervention
Method of measurement
Liverpool elbow score

Intervention groups

1

Description
Intervention group: Group A received IASTM treatment, which was given by the “S-shape tool”, that is an ergonomically designed stainless steel instrument and offers several different hands holds, eliminating operator fatigue. IASTM has drawn more attention for myofascial restriction based upon James Cyriax soft tissue mobilization.
Category
Rehabilitation

2

Description
Intervention group: Group B received myofascial release technique was given. Myofascial release therapy is a type of gentle, constant massage that releases tightness and pain throughout your myofascial tissues. Specific techniques include massage, pressure, skin rolling, twisting, and wringing. Applying pressure and stretch in the direction of the tissue restriction, reportedly causes myofascial lengthening and decreased muscle tension.
Category
Rehabilitation

3

Description
Intervention group: Group C received both Instrument-assisted soft tissue mobilization (IASTM) and Myofascial release technique (MFR) in order to check the effect of both treatments collectively.
Category
Rehabilitation

Recruitment centers

1

Recruitment center
Name of recruitment center
Allied Hospital, Faisalabad
Full name of responsible person
Dr. Shaheer Masood, PT
Street address
C3XJ+F38, Dr. Tusi Rd, Faisalabad, Punjab
City
Faisalabad
Postal code
38000
Phone
+92 303 8926834
Email
shaheer_masood@hotmail.com

2

Recruitment center
Name of recruitment center
Ahmad Poly Care Clinic
Full name of responsible person
Dr. Shaheer Masood, PT
Street address
Satayana Rd, Block B, Peoples Colony 1, Block B People's Colony No 1, Faisalabad, Punjab
City
Faisalabad
Postal code
38000
Phone
+92 331 9232210
Email
sherryr386@gmail.com

Sponsors / Funding sources

1

Sponsor
Name of organization / entity
The University of Faisalabad
Full name of responsible person
Dr. Syed Saqlain Babar, PT
Street address
Faisal town, west canal road, Faisalabad, Punjab.
City
Faisalabad
Postal code
38000
Phone
+92 315 6205017
Email
syedsaqlainbabar21@gmail.com
Grant name
Grant code / Reference number
Is the source of funding the same sponsor organization/entity?
Yes
Title of funding source
The University of Faisalabad
Proportion provided by this source
100
Public or private sector
Private
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
The University of Faisalabad

Full name of responsible person
Dr. Sidra Majeed, PT

Position
Assistant Professor

Latest degree
Master

Other areas of specialty/work
Physiotherapy

Street address
Faisal town, west canal road, Faisalabad, Punjab.

City
Faisalabad

Province
Punjab

Postal code
38000

Phone
+92 334 7731241

Email
sidra.majeed@tuf.edu.pk

Person responsible for scientific inquiries

Contact

Name of organization / entity
The University of Faisalabad

Full name of responsible person
Dr. Sameer ul Haq, PT

Position
Clinical consultant physiotherapist

Latest degree
Master

Other areas of specialty/work
Physiotherapy

Street address
Faisal town, west canal road, Faisalabad, Punjab.

City
Faisalabad

Province
Punjab

Postal code
38000

Phone
+92 342 0817195

Email
sameerulhaq076@gmail.com

Person responsible for updating data

Contact

Name of organization / entity
The University of Faisalabad

Full name of responsible person
Dr. Saqlain Haider, PT

Position
Clinical Physiotherapist

Latest degree
Master

Other areas of specialty/work
Physiotherapy

Street address
Faisal town, west canal road, Faisalabad, Punjab.

City
Faisalabad

Province
Punjab

Postal code
38000

Phone
+92 345 7549503

Email
2022-ms-pt-046@tuf.edu.pk

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
No - There is not a plan to make this available

Data Dictionary
Yes - There is a plan to make this available

Title and more details about the data/document
Effects of instrument -assisted soft tissue mobilization and myofascial release in alleviating post- surgical elbow stiffness Pain access by NPRS, Range of motion of elbow joint by Goniometer, Functional disability by Liverpool elbow score.

When the data will become available and for how long
30 days after publication.

To whom data/document is available
30 days.

Under which criteria data/document could be used
Access to the data will be facilitated through a specified mechanism, such as secure online portal or data sharing platform. Request for access will be renewed by designated committee or entity responsible for insuring that they made an established criteria and comply with relevant regulations and guidelines. Additional supporting information and document may be provided to assist requesters in understanding the available data and its potential application.

From where data/document is obtainable
The University of Faisalabad, 38000 https:/tuf.edu.pk/0092 41 875 0971-5 Fax +92 41 8750970

What processes are involved for a request to access data/document
To receive the documents or data files, the process typically involves the following steps: 1. Request

Initiation: The applicant submits a formal request specifying the documents or data files they need. 2. Verification and Authorization: The organization verifies the request and ensures that the applicant is authorized to access the requested documents or data files. This may involve confirming the identity of the requester and checking their permissions. 3. Processing Time: The processing time varies depending on the complexity of the request, the volume of documents or data files, and any legal or regulatory requirements. It could range from a few hours to several weeks. 4. Document Retrieval or Data Extraction: Once the request is approved, the organization retrieves the documents from their archives or extracts the requested data from their databases. 5. Quality Assurance: Before releasing the documents or data files to the applicant, the organization may conduct quality checks to ensure accuracy and completeness. 6. Delivery: The documents or data files are delivered to the applicant through a secure channel, such as encrypted email, secure file transfer protocols, or a secure online portal. 7. Confirmation of Receipt: The applicant acknowledges receipt of the documents or data files, confirming that they have received the information they requested.

Comments