Clinical Trial Protocol
Iranian Registry of Clinical Trials

16 Sep 2026

Comparative study of corticosteroid injections and platelet rich plasma in the treatment of patients with shoulder tendinopathy compare sonographic findings

Protocol summary

Study aim
Comparison of clinical findings in patients Shoulder tendinopathy with Platelet Rich Plasma and corticosteroid injecting Comparison of the effect of PRP and corticosteroid on pain relief in patients with shoulder tendonopathy Comparison of the effect of PRP and corticosteroid on the range of motion of patients with shoulder tendonopathies Comparison of PRP effect on and corticosteroid supraspinatus tendon thickness in patients with shoulder tendonopathies Comparison of WORC and DASH questionnaire score changes after PRP and corticosteroid injection in patients with shoulder tendonopathy

Design
Randomized clinical trial, single blind, parallel group, 56 patients

Settings and conduct
The study (injection and exercise therapy) was performed in the sports medicine department of Rasoul Hospital.

Participants/Inclusion and exclusion criteria
Shoulder pain that lasts more than three months (162)
Age over 40 years

Intervention groups
PRP injection group, The other group, corticosteroid injections a

Main outcome variables
Pain, Range of Motion, Thickness of tendon

General information

Reason for update
Increase the follow-up time of patients after shoulder injection

Acronym
PRP

IRCT registration information
IRCT registration number: **IRCT201302174251N9**
Registration date: **2013-05-03, 1392/02/13**
Registration timing: **registered_while_recruiting**

Last update: **2020-05-16, 1399/02/27**
Update count: **1**

Registration date
2013-05-03, 1392/02/13

Registrant information

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Tehran University of Medical Sciences

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Recruitment status
Recruitment complete

Funding source
Tehran University of Medical Sciences

Expected recruitment start date
2013-04-21, 1392/02/01

Expected recruitment end date
2015-04-21, 1394/02/01

Actual recruitment start date
empty

Actual recruitment end date
empty

Trial completion date
empty

Scientific title
Comparative study of corticosteroid injections and

platelet rich plasma in the treatment of patients with shoulder tendinopathy compare sonographic findings

Public title

Comparing the effect of corticosteroid injections and platelet rich plasma on the treatment of shoulder tendinopathy

Purpose

Treatment

Inclusion/Exclusion criteria

Inclusion criteria:

Shoulder pain that lasts for more than 3 months limited shoulder range of motion Absence of radicular pain Inflammatory disorders such as rheumatoid arthritis Fibromyalgia lack of complete rotator cuff tear The ligament laxity Non-corticosteroid injections in the past three months

Exclusion criteria:

Unwillingness of the patient to continue treatment shoulder joint surgery The presence of other disorders that limit joint motion such as frozen shoulder

Age

From **40 years** old

Gender

Both

Phase

N/A

Groups that have been masked

- Participant
- Outcome assessor
- Data analyser

Sample size

Target sample size: **56**

Randomization (investigator's opinion)

Randomized

Randomization description

Patients are randomly divided into two groups based on random number table after confirming the diagnosis with MRI and referring to the sports medicine department.

Blinding (investigator's opinion)

Single blinded

Blinding description

The platelet rich plasma group is injected one time. In this group, 35 ml of venous blood was taken and by the Selex centrifuge under the RCF protocol, the blood sample is separated from rich plasma platelet by 1700 and 3200 rpm. Plasma rich platelets are separated after adding calcium gluconate 10% cc platelet concentrate obtained. The injection is performed by a sports medicine specialist in the form of intraarticular with an angle of 30-45 degrees from the posterolateral. And if there is a partial rupture in tendon, 3 cc PRP injection is performed under ultrasound guidance at the tendon rupture site. One week after the injection, the patient is visited, examined, given the necessary advice and also exercise prescription. Exercise is divided to scapula rehabilitation and shoulder muscles training. After one and three months, repeated examinations, including pain, function, Completion of WORC, DASH questionnaire and ultrasound changes was achieved , and a comparison between the patient's clinical and Para clinical symptoms within these periods was performed. The injection for corticosteroid group, however, is applied Methylprednisolone 40 mg once. For patients, one cc of Depomedrol and one cc of 2% lidocaine solution are injected into the intra articular joint in the same PRP manner. In this group, due to the blindness of the study, blood sampling of the patient is performed before corticosteroid injection.

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

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Ghods street Keshavars Blv

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Province

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Postal code

1417653761

Approval date

2012-07-20, 1391/04/30

Ethics committee reference number

19910-91-4-30

Health conditions studied

1

Description of health condition studied

Shoulder Tendinopathy

ICD-10 code

M75.1

ICD-10 code description

rotator cuff syndrome rotator cuff or supraspinatous tear or rupture (complete) (incomplete) not specified as traumatic

Primary outcomes

1

Description

Pain

Timepoint

every 2 weeks up to 8 weeks

Method of measurement

VAS scale

2

Description
range of motion
Timepoint
every 2 weeks up to 3 months
Method of measurement
Goniameter

3

Description
Sonographic finding
Timepoint
at base line and 3 months later
Method of measurement
Sonographic prob

Secondary outcomes

empty

Intervention groups

1

Description
The platelet rich plasma group is injected twice within a month. In this group, 20 ml of venous blood was taken by centrifuges Selex protocol RCF, blood samples from the men with the 1800 and 2000 cycles and women with 1600 and 2000 cycle. Plasma rich platelets are separated after adding calcium gluconate 10% cc platelet concentrate obtained. Under ultrasound Guide, in collaboration with a radiologist and a sports medicine specialist in the area of sub-45 degree lateral Acromion is injected (based on Sonographic Guide). Assessment of clinical sing such as pain (based on VAS measurement), shoulder range of motion and its function is occurred. Moreover, musculoskeletal sonography is applied by two clinician experts. These (findings are) recorded and compared
Category
Treatment - Drugs

2

Description
The injection for corticosteroid group, however, is applied MethylPrednisolone 40 mg once or twice within a month based on the Rheumatologist decision. At the baseline, after four weeks and also eight weeks after intervention, all the studies including pain, range of motion, function, and Sonographic findings changes are evaluated and compared with the data which is recorded before intervention
Category
Treatment - Drugs

Recruitment centers

1

Recruitment center
Name of recruitment center
Rasoul Akram Hospital
Full name of responsible person
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2

Recruitment center
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Sponsors / Funding sources

1

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Grant name
Grant code / Reference number

Is the source of funding the same sponsor organization/entity?
Yes
Title of funding source
Iran 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
sports medicine department Rasoul e Akram hospital
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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
No - There is not a plan to make this available
Title and more details about the data/document
After deidentifing participants, sharing data related to pain, ROM, function and thickness of tendon will be happened
When the data will become available and for how

long

starting 6 months after publication

To whom data/document is available

Researchers and people working in Academic institution

Under which criteria data/document could be used

To applied in research or manuscript

From where data/document is obtainable

Personal email, Mobile phone , research gate

What processes are involved for a request to access data/document

3 months after applying, the document will send through email

Comments