Middle East Journal of Rehabilitation and Health Studies
Volume 10 · Issue 1 · e130587

OPEN PEER REVIEW

# The Effects of Magnet Therapy on Pain and Disability in Patients with Shoulder Impingement Syndrome

Zahra Afzalifard, Abbas Soltani, Ali E. Oskouei

| SUBMITTED | REVISED | ACCEPTED | DOI |
| --- | --- | --- | --- |
| 20 Aug 2022 | 6 Nov 2022 | 22 Nov 2022 | 10.5812/mejrh-130587 |

## About this report

This open peer review (OPR) report shows the public comments made on this article during peer review, by the reviewers, the associate editor and the editor-in-chief, for every revision round, together with the authors' replies. Comments appear only with the consent of the people who wrote them. Reviewers who chose to sign their report are named; the others are shown as "Referee". Comments are edited for language only, and confidential remarks to the editors are not included.

More about open peer review: brieflands.com/knowledgebase/opr

## Contents

1 **Original submission** Referee 1, Associate Editor, Editor-in-Chief ..... 2
2 **Revision 1** Referee 2, Referee 3, Associate Editor, Editor-in-Chief ..... 3
**Authors' reply to reviewers** ..... 4
**Reviewer and editor comments** ..... 9

## 1 Original submission

3 comments · 18 Sep 2022 – 20 Sep 2022

### Referee 1 Reviewer

MINOR REVISION 18 Sep 2022

In appreciation of your valuable investigation, I draw your attention to the following points:

1) Delete the sentence "In all 3 groups, the patients received routine electrotherapy and exercise therapy." in lines 20 & 21 due to repetition.

2) Mention "the Double-blinded (Randomized ??) Clinical Trail" nature of the study in the Methods section.

3) Substitute "In between groups comparison" for "In comparing of the groups" in lines 29 & 30.

4) Substitute "does not have ADDITIONAL positive effect" for "does not have MUCH positive effect" in line 36.

5) In the last paragraph of the introduction, clearly specify which of the shortcomings of previous studies have been solved by your study and in what way.

6) Remove the sentence "After analyzing the pre-treatment and post-treatment data," in line 174.

7) Substitute "The results of this study in all 3 groups, showed an improvement in all the variables" for "The results of this study were that in all 3 groups, there was an improvement in all the variables" in lines 211 & 212.

8) The age range of the study is wide. It is better to extract the interaction effect of AGE (below and above 40 years) AND TREATMENT (Magnet Therapy) with an appropriate analysis.

### Associate Editor

MAJOR REVISION 19 Sep 2022

Dear authors. Many thanks for choosing Middle East Journal to publish your valuable article. This is to inform you that your article was reviewed by peer reviewers. According to the reviewers, the article needs major revision. Please revise the article based on the opinions of the referees and resubmit it.

### Editor-in-Chief

MAJOR REVISION 20 Sep 2022

Dear Authors
According to the reviewers' and associate editor's comments, your article needs major revision. When revising your manuscript, please consider all issues mentioned in the reviewers' comments carefully: please outline every change made in response to their comments and submit the required files.

2

# Revision 1

AUTHORS' RESPONSE TO REVIEWERS

Authors' reply to reviewers

The next pages contain the authors' point-by-point reply to the comments of this revision round, as submitted with the revised manuscript. It is published as the authors wrote it.

**Effects of Magnet Therapy on Pain and Disability in Patients with Shoulder Impingement Syndrome**

**Responses for Reviewer**

The authors would like to thank the reviewers for their precious time and valuable comments. We have carefully addressed all the comments. The corresponding changes and refinements made in the revised paper are summarized in our response below.

**Reviewer 1:**

**Shoulder impingement syndrome (SIS) is actually the supraspinatus tendon being trapped between the anteroinferior corner of the acromion and the greater tuberosity of the humerus." this is not a complete and comprehensive and up-to-date definition of SIS, please correct it. (Primary, secondary, internal, external, …)**

We agree with the reviewer and expanded the definition of SIS and now it reads as follows in page 2 para 1:

*Shoulder impingement syndrome (SIS) is broadly described as encroachment on the subacromial tissues as a result of narrowing of the subacromial space. SIS can also be classified as the primary or secondary impingement. Structural narrowing of the subacromial space is seen in the primary SIS, while more functional disorders are the basis of the secondary SIS. Furthermore, SIS includes the internal and external impingement. The internal impingement is the degenerative processes in the supraspinatus tendon itself that lead to defect. However, in external impingement the injury is caused by the traumatic contact of the shoulder roof with the supraspinatus tendon in subacromion impingement syndrome.*

**"SIS occurs as severe pain in the anterior-posterior and lateral shoulders that extends to the deltoid and biceps areas". Please mention which On of SIS.**

We deleted the above mentioned sentence which is a common complain of all SIS and added more details to address the reviewer's concern on page 4 para 1 of the Method section. The impingement considered in this study was primary and external SIS and now we mentioned it in all corresponding sections.

**Pls delete the ethics link.**

We deleted the Ethics link as requested.

**On what basis would specialists or therapists distinguish between external SIS and internal or primary and secondary SIS?**

The reviewer is correct. The specialist used history taking and clinical examination to distinguish between external and internal as well as the primary and secondary SIS. Furthermore, some criteria which were mentioned in the exclusion criteria are associated with the secondary (some

functional disorders) and internal (structural disorders) SIS, meaning that we excluded them for the study. We now described it with more detail in page 5 under the inclusion and exclusion criteria.

**Why receiving rehabilitation treatment in the past has not been important in the exclusion section?**

The reviewer makes a good point here. Having pain in the shoulder at least for 1 month and receiving no rehabilitation treatment in the past are parts of inclusion and exclusion criteria, respectively. We have modified page 4 to provide more details on the exclusion criteria.

**On what basis have 60 people been selected and what mean and standard deviation, which variable, power and etc please mention reference for it.**

According to the results of the pilot study and with the assumption of power (1-β) of 0.8, α=0.05 and mean±SD of pain assessed by VAS (6.1±1.21), sample size was determined 69 patients (i.e., 23 patients each group). However due to some clinical and technical limitations, it was decreased to 60 patients with the power of 0.77.

**Please mention other parameters of magnet therapy.**

As the reviewer requested, in addition of the intensity of 100 mT and a duration of 30 minutes, other parameters of magnet therapy were mentioned in page 5 para 4.

**For magnet devices please mention country, company, and model.**

General parameters of magnet therapy including country, company, and model were mentioned in page 5 para 4 which now reads as follows:

*In this study, PMT-Q Magnet therapy device, a product of ASA company from Italy with solenoid applicator of 36 x 21 $cm^2$ was applied 12 sessions, 3 times a week for 4 weeks.*

**Please explain the randomization between groups.**

The reviewer is right and we now explained the randomization with more detail in page 5 para 1 as follows:

*Randomization was done by extracting 60 codes (20 codes for each group) from the Excel program, each of which was placed inside a sealed envelope. In this way, an envelope was chosen for each patient randomly.*

**Why is the number of samples 63 in the summary and 60 in the method?**

The reviewer is right and we now corrected it as 60 individuals in both summary and methods sections.

**It is better to include the standard deviation, confidence interval, and p values in the table.**

We included the standard deviation, confidence interval, and p values (in all cases p value was $p<0.05$) in the table as requested.

**Delete the charts.**

We deleted the charts as requested.

**Why group interaction and repeated measures were not studied in the statistical analysis?**

We have already studied the group interaction effect. However, the results of our study revealed that by performing ANCOVA analysis, there is not fixed factor (group) interaction effect with COANOVA variable (i.e., before intervention values) ($p>0.05$). In other words, before intervention values of the variables including VAS, DASH, Flex, Abd, Int.Rot, and Ext.Rot along with the type of intervention (group) do not have any statistically significant effect on the dependent variable (after intervention values).

**The discussion section is written very simply like a literature review, and possible mechanisms causing differences and similarities between studies are not mentioned. It is necessary to be rewritten again.**

We have rewritten much of the discussion section to address the reviewer's concerns.

**No limitation? No suggestion?**

We included the limitation of the current study and some suggestion for the future studies in page 11.

**The discussion and summary sections could be compacted.**

We compacted the discussion and summary sections as suggested by the reviewer.

**Reviewer 2:**

**In appreciation of your Valuable investigation, I draw your attention to the following points:**

**Delete the sentences "In all 3 groups, the patients received routine electrotherapy and exercise therapy." in lines 0f 20 & 21 due to repetition.**

The mentioned sentences were deleted as requested.

**Mention "the Double-blinded (Randomized ??) Clinical Trail" nature of the study in the Methods section.**

We added the double-blinded randomization in page 4 para 1 to address the reviewer's concern.

**Substitute "In between groups comparison" instead of "In comparing of the groups" n lines 29 & 30.**

The mentioned sentences were substituted as requested.

**Substitute "does not have ADDITIONAL positive effect" instesd of "does not have MUCH positive effect", in line 36.**

The mentioned sentences were substituted as requested.

**In the Last paragraph of the introduction, clearly specify which of the shortcomings of previous studies have been solved by your study and in what way.**

We agree with the reviewer and the rewritten the last para of the introduction to address the reviewer's concern which now reads as follows in page 3:

*In the studies conducted on the effect of MT in the treatment of shoulder injuries, the comparison of two different frequencies of MT for treatment has not been performed, and low intensities have often been used. Thus, it seems that the effects of different frequencies of MT on clinical findings in SIS has not been investigated. Therefore, the aim of this study was to evaluate the effects of MT on pain and disability in patients with SIS and to compare two frequencies of 18 and 100 Hz.*

**Remove the sentence "After analyzing the pre-treatment and post-treatment data," in line 174.**

The mentioned sentence was deleted.

**Substitute "The results of this study in all 3 groups, showed an improvement in all the variables" instead of "The results of this study were that in all 3 groups, there was an improvement in all the variables", in lines 211 & 212.**

The mentioned sentences were substituted as requested.

**The age range of the study is wide. It is better to extract the interaction effect of AGE (below and above 40 years) AND TREATMENT (Magnet Therapy) with appropriate analysis.**

The reviewer makes a good point here. However, despite the fact that age range was wide at the beginning of the study, all patients participated in our study were above 40 years old. We now added a comment on this issued in the Suggestion part of the manuscript and corrected the corresponding part in the inclusion criteria.

## 2 Revision 1

4 comments · 8 Nov 2022 – 22 Nov 2022

**Referee 2** Reviewer — ACCEPT 8 Nov 2022

The authors have done a good job of revising this manuscript and addressing the reviewer's comments.
The manuscript now reads with greater focus and clarity.

**Referee 3** Reviewer — ACCEPT 21 Nov 2022

All the points have been addressed.

**Associate Editor** — ACCEPT 21 Nov 2022

We are pleased to inform the authors that all the reviewers of the article accepted the corrections and that the article is now ready to be published.

**Editor-in-Chief** — ACCEPT 22 Nov 2022

Dear Authors
We are pleased to inform you that your article is accepted for publication in the MEJRHS. We hope to receive other suitable articles from your group.