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OPEN PEER REVIEW

Reconstruction of Anterior Cruciate Ligament Over 50 Years Old? Yes, or No

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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.

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1 Original submission

1 comment · 4 Dec 2020

Referee 1 Reviewer

MAJOR REVISION 4 Dec 2020

Dear authors
Hi,
Thank you for sending the manuscript. I think it is about a nice subject. I have some concerns, however.

Did one surgeon operate on all patients in both groups, or did different surgeons operate on them?
Was the time from injury to surgery the same, with no significant difference between the two groups?
Could you clarify the reference to harvesting one third of the hamstring?
Are the P-values for the preoperative comparisons of chondral injury and meniscal injury between the two groups nonsignificant?
Line 123-8 table-3: please define the types of sports considered regular and irregular activity.
Line: 178, 123-8: The time of return to sports is not clear in the results.
Line 191-6 in the discussion? Please make the mean and SD of ROM clear in the results first.
I think the DJD score at the final follow-up, especially in the > 50 group, and its comparison with the preoperative score could be very helpful in this study.
Did you notice any complications in either group? Please report them.
Did you have any failures?
Line 182-4: "Satisfaction level seems to depend on their level of activity and their performance and older patients have muscle atrophy and lower activity levels." What is your evidence for this in your patients?
Line 200-1: what do you mean by "less movement"?
Line 204-8: This is a paradox. I could not determine whether your study and discussion recommend ACL reconstruction in patients > 50 who engage in routine activity or those who engage in sports.

Thank you.

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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.

Dear Reviewer(s):

The authors are grateful that our article has been considered for revision and further publication. The Reviewers' comments and suggestions were extremely precise, meticulous and informative. We sought to provide answers to all the reviewers' questions and to incorporate the corresponding revisions.

Reviewer 1:

Dear authors

Hi,

Thank you for sent manuscript. I think it is about a nice subject. I have some concerns, However.

Did one surgeon operate all patients in both group oy different surgeon did them?

Authors' Response: Yes, all patients in both groups underwent arthroscopic surgery by an orthopedic specialist (the first author).

Was the time of operation from the injury the same and in significant in both groups?

Authors' Response: The mean time interval between injury and surgery was 2.2± 1.45 and 2.3±1.39 month in groups 1 and 2, respectively.

I could not get the mention of harvesting one third of hamstring?

Authors' Response: This was a translation error and the sentence was removed from the surgical technique.

Are P-values insignificant for both groups before operation about chondral injury and meniscal injury?

Authors' Response: Yes, the background variables and preoperative criteria were matched between two groups including: affected site, the level of chondral lesion, Meniscus tear, the duration of the follow-up and the time interval between injury and surgery.

Line 123-8 table-3: please define type of sports about regular and irregular activity.

Authors' Response: We have made this correction.

Line: 178, 123-8: Time of return to sports is not clear in results.

Authors' Response: We have made this correction.

Line 191-6 in discussion? Please make ROM mean and sd clear in results first.

Authors' Response: We have made this correction.

I think DJD score at final follow up especially in > 50 group and comparing it with preoperative score could be very helpful in this study

Authors' Response: Yes, authors agree with the respected reviewer. That is one of the limitations of this study.

Did you notice any complication in each group? Please bring it.

Authors' Response: We have made this correction.

(Also, Acute infection was found in only three patients (two patients in the over 50 years old group and one patient in the under 30 years old group) who received appropriate treatment and achieved complete recovery. None of the patients had a chronic infection.)

Did you have any failure?

Authors' Response: We have made this correction.

Line 182-4: "Satisfaction level seems to depend on their level of activity and their performance and older patients have muscle atrophy and lower activity levels." What is your proof for this in your patients?

Authors' Response: This is just a hypothesis that we have put forward and we still have no reason for this statement.

Line 200-1: what is your mention about "less movement"?

Authors' Response: They have less physical activity

Line 204-8 it is a paradox. I could not find that your study and discussion is to recommend ACL reconstruction in > 50 for who has routine activity or who has sport activity.

Authors' Response: We generally conclude that people over the age of 50 without DJD, and regardless of their activity, have acceptable outcomes after arthroscopic ACL reconstruction.

2 Revision 1

0 comments

No public comments in this round.

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Revision 2

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.

Dear Reviewer(s):

The authors are grateful that our article has been considered for revision and further publication. The Reviewers' comments and suggestions were extremely precise, meticulous and informative. We sought to provide answers to all the reviewers' questions and to incorporate the corresponding revisions.

Reviewer 1:

Dear authors

Hello

Thank you for your revision. I think some of my concerns responded properly. However, Some of the responded concerns need to bring in your manuscript. please reconsider them. And also these concerns:

Line 54: why did you omit these two failure cases?

Authors' Response: We have made this correction. (2 failure due to loss of follow-up).

Please bring in the method that one surgeon did all surgeries.

Authors' Response: line 64: All patients in both groups underwent arthroscopic surgery by the orthopedic specialist (the first author) after general anesthesia.

I could not find anything about the definition of regular and irregular activities.

Authors' Response: We have made this correction.

Line 123: Regular sports activity: exercising three times a week or more often for at least 20 min.

Line 144-6: ". 0.16-degree extension in the group with age less than 30 years old and 0.5 degrees' extension in the group older than 50 years were seen at 6 months after surgery which decreased to zero in both groups at the final follow up" what is your mention about 0.16 and 0.5 degree

Authors' Response: We have made this correction.

Line 145: 0.16-degree extension lack in the group with age less than 30 years old and 0.5 degrees' extension lack in the group older than 50 years were seen at 6 months after surgery which decreased to zero in both groups at the final follow up**.**

Line 209-2: Less physical activity needs a clear definition.

Authors' Response: We have made this correction.

(Less sport activity)

Associate Editor's Comments:

Associate Editor 1:

Hello Dear authors

Please reconsider the previous comments again and also new ones. I recommend, to facilitate reviewing process, making a table to respond to comments and related probable corrections in the text of manuscrit.

Thank you.

Authors' Response: Thank you very much for your suggestion

3 Revision 2

1 comment · 23 May 2021

Associate Editor

MAJOR REVISION 23 May 2021

Hi
Abstract:
What do you mean by " sever chondral injury" in the abstract? Line 7-8: "lack of Degenerative Joint Disease (DJD) symptoms and severe cartilage lesions were matched", whereas in lines 51-2 and 54-58 you included all cases with grade 1 of DJD and any grade of chondral lesions. The table also proved this.
- Line 14- 21: The conclusion of the abstract cannot be inferred from the results. If the satisfaction rate at final follow-up was not significantly different, the conclusion of satisfactory results for patients >50 years of age is not deducible.
- Line 27-8: Is this statement logical? "On the other hand, due to the growing of elderly population, the ACL rupture is expected to increase in these individuals as well."
- Are these statements meaningful?
- Line 29-30: "Reconstruction of ACL (ACL-R) is one of the most common orthopaedic surgeries in 85 to 95% of the patients."

- Line 56-58: "Background variables such as chondral lesions, the presence of the meniscus rupture and its side as well as the side of the injury, the duration of the follow-up and the time interval between injury and surgery were matched between two groups.": The nature of meniscal rupture is totally different in young and old people. How did you match them?

- Line 66-7: "any intra-articular injuries including chondral lesions and meniscus ruptures were corrected by arthroscopic methods with the help of anterolateral and anteromedial portals.": What do you mean by corrections: repair or excision? The approach differs depending on age. Please explain.
- When you explain the level of activity in the results, you need to state in the methods that it was a variable.
Line 122-130
- Lines 142-4: I can understand this statement again: "No significant difference was detected in knee range of motion between the two groups at 6 months after ACL-R and final follow up (0.31 ± 0.5 and 0.16 ± 0.28 in the group over 50 and under 30 years of age, respectively)." What is the scale for 0.31 and 0.16? And in line 145-7: 0.16 and 0.50?
- Line 149: "flexion status" could not convey the meaning clearly.
- Line 149-152: "Also, Acute infection was found in only three patients (two patients in the over 50 years old group and one patient in the under 30 years old group) who received appropriate treatment and achieved complete recovery. None of the patients had a chronic infection." I think the comparison with the data for the <30 group is essential.
- Line 157: "DJD complications" is again my concern. There is a disagreement among the data in the table, abstract, and methods.
210-211: I cannot find the relation of this statement to the other sentences: "old-aged and elderly people have fewer sports activity than young people, and therefore, they inserted lower pressure to their knee."
Line 215 to the end: I think longer follow-ups are needed to reach these conclusions.
Thank you.

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Revision 3

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.

Dear Reviewer(s):

The authors are grateful that our article has been considered for revision and further publication. The Reviewers' comments and suggestions were extremely precise, meticulous and informative. We sought to provide answers to all the reviewers' questions and to incorporate the corresponding revisions.

Associate Editor's Comments:

Associate Editor 1:

Hi

Abstract:

1- What do you mean "sever chondral injury in abstract? Line 7-8: "lack of Degenerative Joint Disease (DJD) symptoms and severe cartilage lesions were matched", when in lines 51-2 and 54-58 you included all cases with grade 1 of DJD and any grade of their chondral lesions. The table also proved this.

Authors' Response: We thank you for your help, and the phrase has been deleted from the abstract.

2- Line 14- 21: The conclusion of the abstract cannot be implied from the results. If satisfaction rate at final follow-up was not significantly different, the conclusion of satisfactory results for >50 years patients is not deductable.

Authors' Response: We have made this correction.

3- - Line 27-8: is this statement logical? "On the other hand, due to the growing of elderly population, the ACL rupture is expected to increase in these individuals as well."

Authors' Response: We have made this correction.

4- Are these statements meaningful?

Line 29-30: "Reconstruction of ACL (ACL-R) is one of the most common orthopaedic surgeries in 85 to 95% of the patients."

Authors' Response: the phrase has been deleted from the introduction

5- Line 56-58: "Background variables such as chondral lesions, the presence of the meniscus rupture and its side as well as the side of the injury, the duration of the follow-up and the time interval between injury and surgery were matched between two groups.": The nature of meniscal rupture is totally different in young and old people. How did you match them?

Authors' Response: Ok, we agree that the meniscal rupture mechanism is different in two groups of different ages, which has not matched in our article. However, in this study, we have match two groups regarding the appearance of meniscal rupture. For example, patients with a longitudinal rupture of the lateral meniscus were matched together or patients with horizontal rupture of external meniscus were matched together.

In general, the mechanism of rupture varies at different ages. Therefore, we had to match two groups regarding the rupture's appearance to compare the two groups in meniscal rupture.

6- Line 66-7: “any intra-articular injuries including chondral lesions and meniscus ruptures were corrected by arthroscopic methods with the help of anterolateral and anteromedial portals.”: What is your mention about corrections: repair or excision. The approach is different on the basis of age. Please explain.

Authors’ Response: The repair was performed in cases where the meniscus was repairable, and a partial meniscectomy was performed in cases where it could not be repaired. However, Patients of the two groups were matched together; that is, patients whose meniscus were repaired were matched together, and patients whose meniscectomy was partial were also matched together.

7- When you explain the level of activity in the results, it is needed to tell in a method that it was a variable.line 122-130

Authors’ Response: We have made this correction (reference added)

8- Lines 142-4: I can understand this statement again: “No significant difference was detected in knee range of motion between the two groups at 6 months after ACL-R and final follow up (0.31 ± 0.5 and 0.16 ± 0.28 in the group over 50 and under 30 years of age, respectively).” What is the scale for 0.31 and 0.16? and line 145-7: 0.16 and 0.50

Authors’ Response: We have made this correction.

Line 140-142: No significant difference was detected in knee range of motion between the two groups at 6 months after ACL-R and final follow up (degree of extension lack (Mean ±standard deviation): 0.31 ± 0.5 and 0.16 ± 0.28 in the group over 50 and under 30 years of age, respectively).

9- Line 149: “flexion status” could not imply the meaning well.

Authors’ Response: We have made this correction.

(flexion degree)

10- Line 149-152: “Also, Acute infection was found in only three patients (two patients in the over 50 years old group and one patient in the under 30 years old group) who received appropriate treatment and achieved complete recovery. None of the patients had a chronic infection.” I think the comparison with the data of group <30 is essential.

Authors’ Response: We explained this matter in the lines 148-150 and did not make a statistical comparison because only three patients in the two groups suffered an acute infection.

11- Line 157: “DJD complications” is again my concern. There is a disagreement among data of table, abstract, and method.

Authors’ Response: We have made this correction.

12- line 210-211: I cannot find the relation of this statement to the other sentences: “old-aged and elderly people have fewer sports activity than young people, and therefore, they inserted lower pressure to their knee.”

Authors’ Response: the phrase has been deleted.

13- Line 215 to the end: I think longer follow-ups are needed to can reach these conclusions.

Authors’ Response: We thank you for your help We have made this correction.

Line 214-216 The comparable results at the patients with <30 years demonstrated that arthroscopic ACL-R in patients over 50 years of age with no or mild DJD has good results. However, studies with longer follow-ups are still needed to confirm this conclusion.

4 Revision 3

0 comments

No public comments in this round.

5

Revision 4

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.

Dear Reviewer(s):

The authors are grateful that our article has been considered for revision and further publication. The Reviewers' comments and suggestions were extremely precise, meticulous and informative. We sought to provide answers to all the reviewers' questions and to incorporate the corresponding revisions.

Reviewers' Comments:

Reviewer 1:

Hello dear authors,

Thank you for your response. I could not find out the method of matching for all background variables and also the type of meniscal treatment. I think it is not possible. Please describe it in detail.

Thank you.

Authors' Response: Thank you for your comment. The number of patients over 50 years old with ACL rupture was low, but since the number of patients under 30 years old with ACL rupture was very high, we had no problem matching patients.

In fact, we first considered the characteristics of patients over 50 years old, and based on that, from a large number of patients under the age of 30, we selected similar patients and matched patients together.

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5 Revision 4

0 comments

No public comments in this round.