OPEN PEER REVIEW

Open Peer Review (OPR)

As a new feature for progressing towards transparency, we decided to open a new window for all of our editors as well as authors titled "**Open Peer Review**". We hope by this new facility, our reviewers will be more motivated and authors will be more satisfied with the review process. We believe that publishing our peer review reports could make a transparent and clear environment for all our efforts within a journal, but not all reviewers tend to publish their comments.

What is "Open Peer Review" process?

An "Open Peer Review" process is making the details of all review process (including reviewers, associate editors, and EICs comments) as "Public" as it is agreed by EIC, Authors, and reviewers.

Advantages of "Open Peer Review" process

- More transparency, constructiveness and tactful comments of the peer review process: leads to an increase in the quality of reviews
- More motivations for all involved roles in the review process
- Authors' satisfactions from the review process: Increases honesty between authors and reviewers
- Education of both authors and new students
- Prevents reviewers from following their individual agendas and leading to the detection of reviewers' conflicts of interests

You can find out more at:
https://sites.kowsarpub.com/kowsar/knowledgebase/category/tree.html#opr.html

Anesthesiology and Pain Medicine
Article DOI: 10.5812/aapm.107431
Published in: Anesthesiology and Pain Medicine: 11(1); e107431

Peer Review Report for "Is Intra-Articular Administration of Fibrinogen Effective in Postoperative Total Knee Arthroplasty Blood Loss? A Randomized Clinical Trial"

Author(s): Farahzad Janatmakan, Fatemeh Javaherforooshzadeh, Mohsen Khorrami, Sara Jarirahmadi, Hojjatollah Khademali

Review Timeline:

Submit Date: 15 Aug 2020
Revised Date: 18 Nov 2020
Accepted Date: 18 Nov 2020

Revision (0)

Here, you can see the **Reviewers**, **Associate Editors** and **EICs'** comments from the beginning to the end of the revision process.

REFEREE: Reviewer | **Revision** (0) 30 Aug 2020

Dear AE,
Comments for the authors:
- Adequate scientific justification for the positive effect of topical fibrinogen on the reduction of postoperative bleeding needs to be explained.
- How was the sample size calculated in this study?
- How did you calculate the blood transfusion?
- What was the amount of fluid received by patients to compensate for bleeding in both groups?
- How long did it take to follow up on patients in the postoperative phase?
- In the presented references, citation to local use of fibrinogen was rare and although it was mentioned in the HAYES study, it could not have a reducing effect on bleeding? (VERY IMPORTANT)
- What is the relationship between local fibrinogen and PT PTT INR values?
- The lack of references related to the article is one of the weaknesses of the study that requires serious assessment.

- Please refer to the fibrinogen formulation and the prescribed dose based on the references.
Thanks.

REFEREE: Reviewer | **Revision** (0) 6 Sep 2020

Dear AE,
It is my honor to be invited in reviewing the process of manuscript N# 10743, entitled" Is intra-articular administration of fibrinogen effective in post Total Knee Arthroplasty blood loss? A randomized clinical trial. "
There are a lot of errors in this study that are mentioned below:
1. Abstract is not representative of the research.
2. There are writing and grammatical mistakes that need to be corrected by an English expert.
3. It is highly recommended that venerable authors follow "guidance for authors" in this journal.
4. The abbreviations that have been mentioned in the abstract and the other parts of the assay (Hb, HCT, INR, PLT, PT, and PTT) needs to be written in complete form the first time.
5. The materials and methods are incomplete. Were the surgeries performed by a certain surgeon? Which kind of prosthesis was inserted? What did the respected authors mean by this sentence "It should be noted that in case of over bleeding, the patient was excluded from the study." What does over bleeding mean? And why do these patients have to be excluded?
6. Discussion: this part is vague and incoherent. There is not any comparison between the results of the present study and the past ones.
7. Conclusion is not appropriate and based on results.
8. References need to be updated.
To put it in a nutshell, in my opinion, this manuscript needs a major revision.
Sincerely Yours

REFEREE: Reviewer | **Revision** (0) 8 Sep 2020

Dear AE,
Comments for the authors:
- Please mention your evidence for fibrinogen at this purpose in TKA?
- Abstract is not the same as the main text, for example, the chosen age in the abstract is 40-70, while 55-80 in the text.
- Mention method of blinding and randomization.
- How did you find the proper sample size for this work?
- The statistics section should be written more completely.
- The exact measurement point times are not clear, before and after surgery.
- References are old and the manuscript should be written based on new ones.
- Please note the fibrinogen drug information completely. Dosage, manufacturing factory, and….
- The manuscript needs to be revised by someone expert in English.
Best Regards

REFEREE: Reviewer | **Revision** (0) 9 Sep 2020

Dear AE,
Comments for the authors:
1- Mention trial design an allocation ratio.
2- Authors explained the surgeon was blind to intervention. But it seems the intervention is related to both of surgeon an anesthesiologist.
3- Blood pressure was measured in more than two times in surgery. But the authors applied statistical test that used for comparison of two amount of variable. Which measure is the baseline measurement for blood pressure?
4- Are there any losses and exclusions for each group of study? Please explain them.
5- What is the limitations of the study?
Thanks.

REFEREE: Associate Editor | **Revision** (0) 9 Sep 2020

Dear EIC,
According to the comments of respected reviewers, the manuscript needs major revision. Also references section need some editing and revision based on Vancouver style, and consider the below references:
- Imani F, Entezary SR, Razi M, Jafarian AA, Yousefshahi F, Etemadi H, Safari S. The Effect of Intra-Articular Meperidine and Bupivacaine 0.5% on Postoperative Pain of Arthroscopic Knee Surgery; a Randomized Double Blind Clinical Trial. Anesth Pain Med. 2015;5(1): e27470.
- Rahimzadeh P, Imani F, Faiz HR, EntezarySR, Nasiri AA, Ziaeefard M. Investigation the efficacy of intra-articular prolotherapy with erythropoietin and dextrose and intra-articular pulsed radiofrequency on pain level reduction and range of motion improvement in primary osteoarthritis of knee. J Res Med Sci. 2014;19(8):696-702.
- Imani F, Patel V B. Therapeutic Challenges for Knee Osteoarthritis, Anesth Pain Med. 2019;9(3):e95377
Rahimzadeh P, Imani F, Faiz SHR, Entezary SR, Zamanabadi MN, Alebouyeh MR. The effects of injecting intra-articular platelet rich plasma or prolotherapy on pain score and function in knee osteoarthritis. Clin Interv Aging. 2018,13:73-79.
- Rahimzadeh P, Imani F, Faiz SHR, Alebouyeh MR, Azad-Ehyaei D, Bahari L, et al. Adding Intra-Articular Growth Hormone to Platelet Rich Plasma under Ultrasound Guidance in Knee Osteoarthritis: A Comparative Double-Blind Clinical Trial. Anesth Pain Med. 2016;6(6):e41719.
Best Regards

REFEREE: EIC | **Revision** (0) 10 Sep 2020

Dear Author,
The reviewers' comments are mentioned. Please correct the details as mentioned above carefully according to reviewers' request.
Thanks.

OPEN PEER REVIEW

Revision (1)

Reply to Reviewers

Ideally, the reviewing process can significantly improve the submitted manuscripts by allowing the authors to take into account the advice of reviewers. Author(s) must reply to all reviewers' comments in a separate Word file, point by point. A "**Reply to Reviewers**" document is submitted along with revised manuscript during submission of revised files, summarizing the changes that the authors made in response to the reviewers' comments. The responses to reviewers' comments specifies how the authors addressed each comment the reviewers made.

You can read the authors' responses to the reviewers' comments in the next page.

Reviewers' Comments:

Reviewer 1:

Dear authors
1-Please mention your evidence for fibrinogen at this purpose in TKA?

Answer: We mentioned our evidence for fibrinogen in TKA in introduction part.

2-Abstract is not the same as the main text, for example, the chosen age in the abstract is 40-70, while 55-80 in the text.

Answer: were corrected

3-Mention method of blinding and randomization

Answer: we mention method of blinding and randomization in the method section

4-How did you find the proper sample size for this work?

Answer: we mention in the method section

5-The statistics section should be written more completely.

Answer: we mention the statistics analysis section in the method section more completely

6-The exact measurement point times are not clear, before and after surgery

Answer: these times were mentioned in method part

7-References are old and the manuscript should be written based on new ones.

Answer: We added new references (1,2,3,4,6,7,9,10,16,17)

8-Please note the fibrinogen drug information completely. Dosage, manufacturing factory, and….
Answer: we considered the fibrinogen drug information completely in the method section

9-The manuscript needs to be revised by someone expert in English.

Answer: The manuscript were revised

Best Regards

Reviewer 2:

Dear Researcher
1-Adequate scientific justification for the positive effect of topical fibrinogen on the reduction of postoperative bleeding needs to be explained.

Answer: we considered the positive effect of topical fibrinogen on the reduction of postoperative bleeding in the introduction part

2-How was the sample size calculated in this study?

Answer: we mention in the method section

3-How did you calculate the blood transfusion?

Answer: start point for transfusions was a hemoglobin level < 8 g/dL unless medical causes required a transfusion above this level. This mentioned in method part

4-What was the amount of fluid received by patients to compensate for bleeding in both groups?
Answer:After releasing the tourniquet, the bleeding was calculated and compensated with packed cell if it was more than the ABL (Maximum Allowable Blood Loss). If the amount of bleeding was less than ABL, the patient was given 3 ml of isotonic serum per 1 ml of blood. This mentioned in method part

5-How long did it take to follow up on patients in the postoperative phase?

Answer: the follow up on patients in the 24 hour after surgery. This was mentioned in method part

6-In the presented references, citation to local use of fibrinogen was rare and although it was mentioned in HAYES study, it could not have a reducing effect on bleeding?(VERY IMPORTANT)

Answer: The topical administration of fibrinogen has been described to stop diffuse hemorrhage in TKA in small studies and could be a hopeful approach to reduce blood loss and so lead to lower transfusion rates(19-20).

We considered the effect of topical fibrinogen on the reduction of postoperative bleeding in the introduction part

7-What is the relationship between local fibrinogen and PT PTT INR values?

Answer: Fibrinogen is a plasma glycoprotein made by the liver, which is converted to fibrin and blood clots by thrombin enzymes following tissue and vascular injury and it is a substrate for thrombin, plasmin, and active factor XIII. Thus affecting the PT,INR.This was mentioned in introduction part

8-The lack of references related to the article is one of the weaknesses of the study that requires serious assessment.

Answer: The references were added(1,2, ,19,20,21,26)

9-Please refer to the fibrinogen formulation and the prescribed dose based on the references.
Answer: dosage of fibrinogen administration was done undergoing reference 23

Reviewer 3:
Dear EIC
It is my honor to be invited in reviewing process of manuscript N# 10743, entitled" Is intra-articular administration of fibrinogen effective in post Total Knee Arthroplasty blood loss? A randomized clinical trial. "
There are a lot of errors in this study that are mentioned below:

1. Abstract is not representative of the research.

Answer: abstract was corrected

2. There are writing and grammatical mistakes that need to be corrected by an English expert.

Answer: The manuscript were revised

3. It is highly recommended that venerable authors follow “guidance for authors” in this journal.

Answer: we follow “guidance for authors
4. The abbreviations that have been mentioned in abstract and the other parts of assay like (Hb, HCT, INR, PLT, PT and PTT) needs to be written in complete form at the first time.

Answer: were corrected

5. The materials and methods are incomplete. Were the surgeries performed by a certain surgeon? Which kind of prosthesis was inserted? What did the respected authors meant by this sentence “It should be noted that in case of over bleeding, the patient was excluded from the study.” What does over bleeding mean? And why these patients have to be excluded?

Answer: All the above points were stated in the method section

6. Discussion: this part is vague and incoherent. There are not any comparison between the results of the present study and the past ones.

Answer: were corrected

7. Conclusion is not appropriate and based on results.

Answer: were corrected

8. References need to be updated.

Answer: References were updated

Reviewer 4:

1- Mention trial design an allocation ratio.

Answer: The patients were randomized 1:1 to take either fibrinogen or placebo. This was mentioned in method section

2- Authors explained the surgeon was blind to intervention. But it seems the intervention is related to both of surgeon an anesthesiologist.

Answer: the patients , surgeon and investigator did not know the type of injectable drug . (The injectable drug was prepared by the researcher and named A and B).

This was mentioned in method section

3- Blood pressure was measured in more than two times in surgery. But the authors applied statistical test that used for comparison of two amount of variable. Which measure is the baseline measurement for blood pressure?

Answer: this item were deleted

4- Are there any losses and exclusions for each group of study? Please explain them.

Answer: This was explained in the method section

5- What is the limitations of the study?

Answer: The limitations of this study was the small number of patients, so with this number of cases, can not get the real result. It is recommended that in the future this study be done with a larger sample size and in a multi-center manner.

This was mentioned in the text

OPEN PEER REVIEW

Revision (1)

Here, you can see the **Reviewers**, **Associate Editors** and **EICs'** comments from the beginning to the end of the revision process.

REFEREE: Reviewer | **Revision** (1) 17 Nov 2020

Dear AE,
Fortunately, the author corrected the majority of the requested items. For increasing the quality of the paper, consider below four references before publishing:
- Imani F, Patel V B. Therapeutic Challenges for Knee Osteoarthritis. Anesth Pain Med. 2019;9(3):e95377
- Imani F, Entezary SR, Razi M, Jafarian AA, Yousefshahi F, Etemadi H, Safari S. The Effect of Intra-Articular Meperidine and Bupivacaine 0.5% on Postoperative Pain of Arthroscopic Knee Surgery; a Randomized Double Blind Clinical Trial. Anesth Pain Med. 2015;5(1): e27470
- Rahimzadeh P, Imani F, Faiz SHR, Entezary SR, Zamanabadi MN, Alebouyeh MR. The effects of injecting intra-articular platelet rich plasma or prolotherapy on pain score and function in knee osteoarthritis. Clin Interv Aging. 2018,13:73-79
- Rahimzadeh P, Imani F, Faiz HR, EntezarySR, Nasiri AA, Ziaeefard M. Investigation the efficacy of intra-articular prolotherapy with erythropoietin and dextrose and intra-articular pulsed radiofrequency on pain level reduction and range of motion improvement in primary osteoarthritis of knee. J Res Med Sci. 2014;19(8):696-702
Sincerely

REFEREE: Associate Editor | **Revision** (1) 17 Nov 2020

Dear EIC,
Based on reviewers' comments this revised format can be considered as a minor revision.
Regards

REFEREE: EIC | **Revision** (1) 17 Nov 2020

Dear Author,
The reviewers' comments are mentioned. Please correct the details as mentioned above carefully according to reviewers' request.
Thanks.

OPEN PEER REVIEW

Revision (2)

Reply to Reviewers

Ideally, the reviewing process can significantly improve the submitted manuscripts by allowing the authors to take into account the advice of reviewers. Author(s) must reply to all reviewers' comments in a separate Word file, point by point. A "**Reply to Reviewers**" document is submitted along with revised manuscript during submission of revised files, summarizing the changes that the authors made in response to the reviewers' comments. The responses to reviewers' comments specifies how the authors addressed each comment the reviewers made.

You can read the authors' responses to the reviewers' comments in the next page.

Reviewers' Comments:

Dear editor

We added 'Rahimzadeh P, Imani F, Faiz HR, EntezarySR, Nasiri AA, Ziaeefard M. Investigation the efficacy of intra-articular prolotherapy with erythropoietin and dextrose and intra-articular pulsed radiofrequency on pain level reduction and range of motion improvement in primary osteoarthritis of knee. J Res Med Sci. 2014;19(8):696-702' .Reference number 19

OPEN PEER REVIEW

Revision (2)

Here, you can see the **Reviewers**, **Associate Editors** and **EICs'** comments from the beginning to the end of the revision process.

REFEREE: Reviewer | **Revision** (2) — 18 Nov 2020

Dear AE,
The requested recommendation was made, and it is acceptable.
Sincerely

REFEREE: Associate Editor | **Revision** (2) — 18 Nov 2020

Dear EIC
This revision can be consider for publishing
Final decision: Acceptance
Regards

REFEREE: EIC | **Revision** (2) — 18 Nov 2020

Dear Author,
The document is reviewed carefully by the reviewers. According to their comments and your revisions as requested, this manuscript is accepted.
Thanks.