

Impact of early ambulation on functionality in patients undergoing valve replacement surgery

André Luiz Lisboa Cordeiro, Jaiildes Reis Dos Reis, Huendy Borges Da Cruz, André
Raimundo Guimarães, Giulliano Gardenghi

Corresponding author

André Luiz Lisboa Cordeiro

*Rua Pássaro Vermelho, sem número, Condomínio Salvador Dali, house 47, Feira de Santana,
Bahia, Brazil*

Handling editor:

Michal Heger

Department of Pharmaceutics, Utrecht University, the Netherlands

Department of Pharmaceutics, Jiaying University Medical College, Zhejiang, China

Review timeline:

Received: 27 December, 2020
Editorial decision: 18 March, 2021
Revision received: 21 March, 2021
Editorial decision: 4 April, 2021
Revision received: 4 April, 2021
Editorial decision, 12 April, 2021
Revision received: 21 April, 2021
Editorial decision: 27 April, 2021
Revision received: 3 October, 2021
Editorial decision: 3 October, 2021
Published online: 6 November, 2021

1st Editorial decision

18-Mar-2021

Ref.: Ms. No. JCTRes-D-20-00154

IMPACT OF EARLY AMBULATION ON FUNCTIONALITY IN PATIENTS

SUBMITTED TO VALVE REPLACEMENT

Journal of Clinical and Translational Research

Dear Dr Cordeiro,

Reviewers have now commented on your paper. You will see that they are advising that you revise your manuscript. If you are prepared to undertake the work required, I would be pleased to reconsider my decision.

For your guidance, reviewers' comments are appended below.

If you decide to revise the work, please submit a list of changes or a rebuttal against each

point which is being raised when you submit the revised manuscript. Also, please ensure that the track changes function is switched on when implementing the revisions. This enables the reviewers to rapidly verify all changes made.

Your revision is due by Apr 17, 2021.

To submit a revision, go to <https://www.editorialmanager.com/jctres/> and log in as an Author. You will see a menu item call Submission Needing Revision. You will find your submission record there.

Yours sincerely

Michal Heger
Editor-in-Chief
Journal of Clinical and Translational Research

Reviewers' comments:

Reviewer #1: I have read with interest the manuscript "IMPACT OF EARLY AMBULATION ON FUNCTIONALITY IN PATIENTS SUBMITTED TO VALVE REPLACEMENT". This is an interesting topic that can make a potential contribution to clinical practice. However, I have some concerns about this work.

1. In Study protocol

In this study, the criteria that separated the Walking group and the non-Walking group were whether or not they could walk 15m. Is this criteria used in other studies? What is the reason for using this criteria? I need to explain the meaning of 15m. Can I add something about this?

2. In FIM of Measuring instruments

FIM was measured in preoperative and ICU discharge. Regarding the measurement, it is necessary to explain who the measurement was made by. Can I add these?

3. In Results (Tabel 1)

In Table 1, there was no data on the length of hospital stay. The length of stay in the two groups is important in relation to severity. Can I add data on length of hospital stay?

4. In Results (Table 2)

In Table 2, the decrease in FIM and Perme scale is shown by Delta. However, these are the scores at the time of ICU discharge. How has these score changed at discharge of hospital? FIM and Perme scale at discharge of hospital may be indicators of intervention by physical therapy. Can you show these?

5. In Results (Table 2)

In Table 2, the Walking group had a lower FIM than the non-Walking group, but the Perme scale did not. I didn't understand why the FIM decreased and the Perme did not decrease. Can I add these in the discussion ?

6. In FIM of Results

FIM consists of a motor domain and a cognitive domain. Did both the motor and cognitive

domains of FIM decrease in this study? The impact on the Motor and cognitive domains is important as a information for interventions of physical therapy. Can you add it in the result and discussion?

7. In Discussion

In reduced of FIM score, these clinical implications are important. For example, what is wrong with a 36 point reduction in patients undergoing valve replacement ? Can you explain the clinical implications at discussion?

8. In Discussion

It says "It was found in the present study that early mobilization had an impact on functionality in patients undergoing valve replacement." However, it seems difficult to describe the effect of early mobilization in this analysis. Perhaps these results are patient characteristics of the two groups. These results are considered to be the effects of valve replacement in the walking group and non-walking group in the ICU on FIM and Perme scale. Can the notation be corrected based on these points?

Reviewer #2: The article is interesting but some highlights must be fulfilled:

In the objective, I suggest changing the word impact because the authors made a comparison of walking and non-walking protocols.

In the methodology you must add the sample calculation. They should highlight which are the other physiotherapy techniques performed on patients in addition to whether or not to walk. Both followed the same protocol and if so, highlight how it is done.

Results in tables 1 and 3 remove the% inside the table and place it in the column title line.

Table 2 should add the intragroup p value with analysis of the t-test for samples paired on the line below the values of each group, which allows the reader to analyze the significance value between the pre and post intervention moments in each group.

I suggest adding the bibliography in the discussion as it is a current protocol that highlights the mobilization and beneficial effects.

Windmoller P, Bodnar ET, Casagrande J, Dallazen F, Schneider J, Berwanger AS, Borghi-Silva A, Winkelmann ER. Physical Exercise Combined With CPAP in Subjects Who Underwent Surgical Myocardial Revascularization: A Randomized Clinical Trial. *Respiratory Care* 2020; 65(2): 150-7

Best regards,

Authors' response

REPLY TO REVIEWERS

Reviewers' comments:

Reviewer #1: I have read with interest the manuscript "IMPACT OF EARLY AMBULATION

ON FUNCTIONALITY IN PATIENTS SUBMITTED TO VALVE

REPLACEMENT". This is an interesting topic that can make a potential contribution to clinical practice. However, I have some concerns about this work.

1. In Study protocol

In this study, the criteria that separated the Walking group and the non-Walking group were whether or not they could walk 15m. Is this criteria used in other studies? What is the reason for using this criteria? I need to explain the meaning of 15m. Can I add something about this?

RESPONSE: The distance of 15 meters was established because it was the average walk for these patients after the surgical procedure.

2. In FIM of Measuring instruments

FIM was measured in preoperative and ICU discharge. Regarding the measurement, it is necessary to explain who the measurement was made by. Can I add these?

RESPONSE: Both scales were applied by a blind examiner.

3. In Results (Tabel 1)

In Table 1, there was no data on the length of hospital stay. The length of stay in the two groups is important in relation to severity. Can I add data on length of hospital stay?

RESPONSE: The information was included in table 1.

4. In Results (Table 2)

In Table 2, the decrease in FIM and Perme scale is shown by Dalta. However, these are the scores at the time of ICU discharge. How has these score changed at discharge of hospital? FIM and Perme scale at discharge of hospital may be indicators of intervention by physical therapy. Can you show these?

RESPONSE: We included the FIM value and perme at the time of hospital discharge.

5. In Results (Table 2)

In Table 2, the Walking group had a lower FIM than the non-Walking group, but the Perme scale did not. I didn't understand why the FIM decreased and the Perme did not decrease. Can I add these in the discussion ?

RESPONSE: Information included in the discussion in first paragraph.

6. In FIM of Results

FIM consists of a motor domain and a cognitive domain. Did both the motor and cognitive domains of FIM decrease in this study? The impact on the Motor and cognitive domains is important as a information for interventions of physical therapy. Can you add it in the result and discussion?

RESPONSE: We put the division in the results and also included it in the discussion.

7. In Discussion

In reduced of FIM score, these clinical implications are important. For example, what is wrong with a 36 point reduction in patients undergoing valve replacement ? Can you explain the clinical implications at discussion?

RESPONSE: The worsening of 36 points in patients who did not walk can be associated with clinical and functional aspects as a limitation for carrying out activities after discharge from the ICU.

8. In Discussion

It says "It was found in the present study that early mobilization had an impact on functionality in patients undergoing valve replacement." However, it seems difficult to describe the effect of early mobilization in this analysis. Perhaps these results are patient characteristics of the two groups. These results are considered to be the effects of valve replacement in the walking group

and non-walking group in the ICU on FIM and Perme scale. Can the notation be corrected based on these points?

RESPONSE: In the text we mention that the mobilization had an impact, participation and not that it was solely responsible for the functional change.

Reviewer #2: The article is interesting but some highlights must be fulfilled:

In the objective, I suggest changing the word impact because the authors made a comparison of walking and non-walking protocols.

RESPONSE: We exchange to compare.

In the methodology you must add the sample calculation. They should highlight which are the other physiotherapy techniques performed on patients in addition to whether or not to walk. Both followed the same protocol and if so, highlight how it is done.

RESPONSE: The sample was for convenience, with no sample calculation. In addition to walking, the two groups performed procedures such as breathing exercises, cycle ergometry, active kinesiotherapy and seated in the armchair.

Results in tables 1 and 3 remove the% inside the table and place it in the column title line. Table 2 should add the intragroup p value with analysis of the t-test for samples paired on the line below the values of each group, which allows the reader to analyze the significance value between the pre and post intervention moments in each group

RESPONSE: Removed the percentage information in tables 1 and 3. We include intragroup values.

I suggest adding the bibliography in the discussion as it is a current protocol that highlights the mobilization and beneficial effects.

Windmoller P, Bodnar ET, Casagrande J, Dallazen F, Schneider J, Berwanger AS, Borghi-Silva A, Winkelmann ER. Physical Exercise Combined With CPAP in Subjects Who Underwent Surgical Myocardial Revascularization: A Randomized Clinical Trial. *Respiratory Care* 2020; 65(2): 150-7

RESPONSE: Included.

2nd Editorial decision
04-Apr-2021

Ref.: Ms. No. JCTRes-D-20-00154R1
IMPACT OF EARLY AMBULATION ON FUNCTIONALITY IN PATIENTS
SUBMITTED TO VALVE REPLACEMENT
Journal of Clinical and Translational Research

Dear author(s),

Reviewers have submitted their critical appraisal of your paper. The reviewers' comments are appended below. Based on their comments and evaluation by the editorial board, your work was FOUND SUITABLE FOR PUBLICATION AFTER MINOR REVISION.

If you decide to revise the work, please itemize the reviewers' comments and provide a point-by-point response to every comment. An exemplary rebuttal letter can be found on at <http://www.jctres.com/en/author-guidelines/> under "Manuscript preparation." Also, please use the track changes function in the original document so that the reviewers can easily verify your responses.

Your revision is due by May 04, 2021.

To submit a revision, go to <https://www.editorialmanager.com/jctres/> and log in as an Author. You will see a menu item call Submission Needing Revision. You will find your submission record there.

Yours sincerely,

Michal Heger
Editor-in-Chief
Journal of Clinical and Translational Research

Reviewers' comments:

Reviewer #1: 1 .

In Table 3 of the results, you state that the walking group had a lower incidence of adverse events verified during walking.

However, this table does not show the difference in the incidence of adverse events between the walking and non-walking groups.

It is necessary to show the incidence of adverse events in the walking and non-walking groups.

2 .

The results in Table 3 show adverse events.

Adverse events are thought to make walking difficult.

The causes of adverse events in the non-walking group are important.

In Table 1, there are no significant differences in basic attributes, complications and surgical data.

Is it possible to describe the cause of the of adverse event in the non-walking group in the Discussion?

Those knowledge is needed to walk after surgery.

Authors' response

REPLY TO REVIEWERS

Reviewers' comments:

Reviewer #1: 1 .

In Table 3 of the results, you state that the walking group had a lower incidence of adverse events verified during walking.

REPLY: Exactly. The group that did not walk did not present adverse events.

However, this table does not show the difference in the incidence of adverse events between the walking and non-walking groups.

REPLY: In the result, we inform that the incidence of adverse events in the walking group was low, without comparison with that which did not walk.

It is necessary to show the incidence of adverse events in the walking and non-walking groups.

REPLY: There is no such possibility since a group did not walk. Our goal was related to functionality. We have included adverse events as a demonstrator of safety in the walking group.

2 .

The results in Table 3 show adverse events.

REPLY: Exact.

Adverse events are thought to make walking difficult.

REPLY: Adverse events were verified during the march.

The causes of adverse events in the non-walking group are important.

REPLY: Adverse events were not listed as they are associated with walking. Since the second group did not walk, there are no related adverse effects.

In Table 1, there are no significant differences in basic attributes, complications and surgical data.

REPLY: Correct! There is no difference between the groups showing that the differences in Table 2 were not influenced by the clinical and surgical characteristics.

Is it possible to describe the cause of the of adverse event in the non-walking group in the Discussion?

REPLY: There were no adverse effects associated with walking in this group.

Those knowledge is needed to walk after surgery.

REPLY: We don't understand that comment.

3rd Editorial decision
12-Apr-2021

Ref.: Ms. No. JCTRes-D-20-00154R2
IMPACT OF EARLY AMBULATION ON FUNCTIONALITY IN PATIENTS
SUBMITTED TO VALVE REPLACEMENT
Journal of Clinical and Translational Research

Dear author(s),

Reviewers have submitted their critical appraisal of your paper. The reviewers' comments are appended below. Based on their comments and evaluation by the editorial board, your work was FOUND SUITABLE FOR PUBLICATION AFTER MINOR REVISION.

If you decide to revise the work, please itemize the reviewers' comments and provide a point-by-point response to every comment. An exemplary rebuttal letter can be found on at <http://www.jctres.com/en/author-guidelines/> under "Manuscript preparation." Also, please use the track changes function in the original document so that the reviewers can easily verify your responses.

Your revision is due by May 12, 2021.

To submit a revision, go to <https://www.editorialmanager.com/jctres/> and log in as an Author. You will see a menu item call Submission Needing Revision. You will find your submission record there.

Yours sincerely,

Michal Heger

Editor-in-Chief
Journal of Clinical and Translational Research

Reviewers' comments:

Dear authors,

Thank you for submitting the revision to JCTR.

The peer review process has now been completed.

However, before we can proceed to publishing your manuscript, we kindly ask you to eliminate the grammar/spelling and syntax errors in the document in line with our author guidelines regarding academic level English. Preferably you involve a native speaker. Alternatively, please contact the editorial board (m.heger@jctres.com) for assistance from one of our editors, which can be provided for a fee.

Thank you and we look forward to your upgraded manuscript.

Michal Heger
Editor

4th Editorial decision
27-Apr-2021

Ref.: Ms. No. JCTRes-D-20-00154R3
IMPACT OF EARLY AMBULATION ON FUNCTIONALITY IN PATIENTS
SUBMITTED TO VALVE REPLACEMENT
Journal of Clinical and Translational Research

Dear author(s),

Reviewers have submitted their critical appraisal of your paper. The reviewers' comments are appended below. Based on their comments and evaluation by the editorial board, your work was **FOUND SUITABLE FOR PUBLICATION AFTER MINOR REVISION**.

If you decide to revise the work, please itemize the reviewers' comments and provide a point-by-point response to every comment. An exemplary rebuttal letter can be found on at <http://www.jctres.com/en/author-guidelines/> under "Manuscript preparation." Also, please use the track changes function in the original document so that the reviewers can easily verify your responses.

Your revision is due by May 27, 2021.

To submit a revision, go to <https://www.editorialmanager.com/jctres/> and log in as an Author. You will see a menu item call Submission Needing Revision. You will find your submission record there.

Yours sincerely,

Michal Heger
Editor-in-Chief
Journal of Clinical and Translational Research

Reviewers' comments:

Dear authors,

Thank you for submitting the revision to JCTR.

Unfortunately, the text still needs more work from a linguistic end. We kindly ask you to eliminate the grammar/spelling and syntax errors in the document in line with our author guidelines regarding academic level English. Preferably you involve a native speaker or a third-party service contractor. Alternatively, please contact the editorial board (m.heger@jctres.com) for assistance from one of our editors, which can be provided for a fee.

Please pay particular attention to consistency, especially with notations such as " $p < 0.05$ ". Why is there a space before the $<$ sign and not thereafter.

Furthermore, it is clear that the paper was not perused over by a native speaker inasmuch as there are many syntax errors that a native speaker would never make. Please correct all such errors throughout the manuscript.

Thank you and we look forward to your upgraded manuscript.

Michal Heger
Editor

5th Editorial decision
03-Oct-2021

Ref.: Ms. No. JCTRRes-D-20-00154R4
IMPACT OF EARLY AMBULATION ON FUNCTIONALITY IN PATIENTS
SUBMITTED TO VALVE REPLACEMENT
Journal of Clinical and Translational Research

Dear authors,

I am pleased to inform you that your manuscript has been accepted for publication in the Journal of Clinical and Translational Research.

You will receive the proofs of your article shortly, which we kindly ask you to thoroughly review for any errors.

Thank you for submitting your work to JCTR.

Kindest regards,

Michal Heger
Editor-in-Chief

Journal of Clinical and Translational Research
Peer review process file 07.202106.005



Journal of Clinical and Translational Research

Comments from the editors and reviewers: