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OPEN PEER REVIEW

Relationship Between the Coronary Artery Calcium (CAC) Score and the Angle Between the Aortic Valve and the Left Ventricular Inflow Long Axis (AV-LV) as Cardiovascular Risk Factors

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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

4 comments · 27 Oct 2020 – 13 Nov 2020

Referee 1 Reviewer

MAJOR REVISION 27 Oct 2020

The submitted manuscript dealt with a supposed relationship between the measured left ventricular inflow-outflow angle and coronary artery calcium (CAC) scoring.
The major concerns are as follows:
1- CAC is spelled out four times and AV-LV is spelled out twice in the main text; the first occurrence of CAC is appropriately spelled out, and the remaining three occurrences have to be abbreviated as CAC.
2- Please clarify whether a history of previous coronary angioplasty/stenting or CABG was considered an exclusion criterion.
3- Since CT-Angiography (CTA) is performed following contrast injection, it cannot be used to measure the CAC score, and hence, a few statements implying the use of CTA for CAC scoring have to be corrected.
4- What was the slice thickness used for CAC scoring?
5- What was the CAC scoring software used for? Please clarify.
6- A few abbreviations and acronyms like HU, HLP, FH, MI, DM, and PET have to be spelled out at their first appearance in the main text.
7- Please specify the phase of the cardiac cycle at which the CTA images were reconstructed.
8- The contrast medium type, its iodine concentration, and injection rate have to be mentioned.
9- Please specify how many individuals assessed the images.
10- The city and country of the SPSS vendor have to be mentioned.
11- It is recommended that the technique of drawing lines and their corresponding planes be described in more detail. The corresponding lines have to be shown in the provided Figures.
12- In the statement “Plaques volumes and platelet characteristics identified by CT angiography are important factors in coronary artery blood flow and improved vascular lesion identification.”, what does “platelet characteristics” mean?
13- In the statement “The results of this study were inconsistent with Veer et al. study, which concluded that valve orientation did not have a significant effect on coronary artery blood flow.”, it seems that the word inconsistent has to be replaced by consistent, since the findings are in keeping with those results.
14- The word “statically” has to be replaced by “statistically” in the statement: “In conclusion, the AV-LV angle and CAC score had no statically significant relationship with each other”.
15- It is recommended that the limitations of this study be mentioned.

Referee 2 Reviewer

MAJOR REVISION 6 Nov 2020

Regarding manuscript # 110421, “Relation of Coronary Artery Calcium (CAC) Score with the Angle between Aortic Valve and Left Ventricle Inflow Long axis (AV-LV); As Cardiovascular Risk Factors”, I would like to discuss some issues which I have listed below:
1- In the abstract section and Table 1, I think the mean BMI of the patients is not correct. Please clarify.
2- In the Material and Methods section, I do not think including an ethics ID is necessary, and it would be against the journal's blinding policy.
3- Please explain how you chose these 74 patients. Was it a consecutive selection?
4- As you have mentioned, coronary CT angiography was indicated for the patients based on the American Heart Association guideline. Please provide a reference for it.
5- In the exclusion criteria part of the article, there are some issues which I am listing below:

A. Please verify what your method and criteria were for the evaluation of left ventricular dilatation and aortic regurgitation.
B. I believe that, regarding the evaluation of coronary artery calcification, patients with coronary stents or patients with a history of previous CABG should also be excluded.
6- Please provide the model name of the CT machine and the name of the software used to evaluate patients' images.
7- Please explain more about the method of calculating the AV-LV angle.
8- In the 4th sentence in the result section, I believe "Figure 1" should be changed to "Table 1".
9- In the result section, it is mentioned that 6 patients (8%) had a history of angiography evaluation, while in the table it is said that 6 patients had a history of angioplasty. Please clarify and explain whether stent replacement was performed for the patients.
10- As far as I know, a different orientation of the aortic valve or other cardiac chambers is not a known predictive factor, as you have mentioned in the first section of the discussion. Please clarify this, and if it is so, please provide a reference or references for it.
11- In the discussion section, you have mentioned that CAC had a significant relationship only with hypertension in your study, while I think it also had a significant relationship with age based on your results.
12- The last sentence of the third paragraph of the discussion needs clarification (Line 146-147-148).
13- In my view, reference numbers 26 and 27 and their results are irrelevant to the current study.
14- Please provide a reference for the last sentence of the seventh paragraph of the discussion (Line 172-173-174).
15- Please clarify the last sentence of the eighth paragraph of the discussion (Line 183-184).
16- HTN in the last sentence of the discussion should be replaced with hypertension.
17- In table 1 and table 2, diabetes mellitus should be corrected.
18- CAC should be correctly defined in table 2.

Associate Editor

MAJOR REVISION 11 Nov 2020

Based on the reviews, the submitted manuscript requires MAJOR REVISION before it can be reassessed.

Editor-in-Chief

MAJOR REVISION 13 Nov 2020

Dear authors,
Your article needs Major Revision.
Regards

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.

Manuscript # 110421

Relation of Coronary Artery Calcium (CAC) Score with the Angle between Aortic Valve and Left Ventricle Inflow Long axis (AV-LV); As Cardiovascular Risk Factors

In the following, the authors address all the Reviewers' comments in detail. We thank the reviewers for their valuable comments. We made every effort to incorporate changes as suggested, which have led to significant enhancements to the paper. All of the changes consumed in the manuscript are highlighted as green.

Comments by Reviewer #1:

Regarding this manuscript, it can be said that the design of the study is not very appropriate for its purpose and, the sample size is not sufficient for the purpose of the study. Methodologically, the following edits are required:

1. Abstract must be written according to journal guidelines

Author's response: Thanks to the reviewer for mentioning this problem. The authors have rewritten the abstract based on the journal guidelines.

2. In "single-center prospective cross-sectional" phrase: The single-center prospective words must be deleted.

Author's response: The mentioned phrase is deleted in the revised manuscript, as per the reviewer's suggestion.

In abstract method mentioned "from July 2019 to January 2020 examined 74 patients using computed tomography angiography.":

3.1. Must be added what type(s) of patients selected

Author's response: The patients have been selected by the American Heart Association Guidelines and the phrase "indicated for computed tomography angiography as specified by the American

Heart Association guideline” has been added to the revised manuscript based on the reviewer’s suggestion and a proper citation was considered.

3.2. The location of study must be mentioned

Author’s response: The authors have already considered this and for keeping the study blind and due to the blinded policy, did not mention the location. Due to reviewer’s suggestion, the location “Modarres Hospital, Iran”, has been added to the revised manuscript.

In abstract results "CAC score has only a relation with hypertension and age with a p-value of 0.008 and 0.001, respectively.":

4.1. Must be mentioned statistically significant relation

Author’s response: The authors would like to thank the reviewer’s preciseness in reading the manuscript. The statistically significant has been added to the revised manuscript.

4.2. Moreover p-value, the correlation coefficients' value must be reported

Author’s response: Thanks to the reviewer for mentioning this important issue. The correlation coefficient has been added to the revised manuscript and table, for BMI and age; however, the hypertension in this study is considered as a qualitative value; hence, the correlation coefficient could not be calculated for this qualitative value.

Study design:

5.1. 74 sample size is very small for a cross-sectional study that wants to estimate a relation in the subset of community. Please for convincing me, not for adding in the manuscript draft, explain about assumptions and formula that used for calculation of sample size. Moreover,

must be described about sampling method and reference population of the study in the manuscript file.

Author's response: In order to reassure that the sample size works well, the authors have calculated the sample size requested by the reviewer in this comment. There is not many papers investigating the CAC score and AV-LV angle correlation. Our study is the first evaluation of this correlation. The most relevant previous study we found was the Konishi et. al study on relation between CAC score and left main and left anterior descending arteries bifurcation angle and they calculated the R as 0.269 [1]. At first, we consume the relation between these two factors to be significant, hence; we used the "Participants Number for Correlation Coefficient" formula, showed below, using "r" achieving at Konishi et. al study. The result was 80.92 participants, 8 of which were excluded from the study and the final participants remained 72. However, one of the limitations of our study was the sample size and future studies with more participants would improve the result. Additionally, our sampling method was Consecutive considering excluding criteria (We closed the participants gathering and sampling by reaching to the number we previously calculated.)

حجم نمونه در ضریب همبستگی (رویکرد اول)

Participitant number for correlation coefficient

$$N = \frac{\left(Z_{1-\alpha} + Z_{1-\beta}\right)^2}{u_p^2} + 3$$

$$u_p = \frac{1}{2}\ln\frac{1+\rho}{1-\rho} + \frac{\rho}{2(N-1)}$$

5.2. Inclusion criteria must be added before of exclusion criteria.

Author's response: The inclusion criteria for the study were the patients who admitted to the Modarres Hospital and having the indication for conducting CT angiography based on American

Heart Association guideline. The sentence “Patients who were admitted to the Modarres Hospital and indicated for coronary CT angiography as specified by the American Heart Association guideline were included.” was added to the revised manuscript.

6. The study design is cross-sectional and so, in these studied, only baseline data gathered and used. Therefore, it is better the baseline idiom to be deleted from whole parts of manuscript.

Author’s response: The mentioned phrase is deleted in the revised manuscript, as per the reviewer’s suggestion.

Tables:

7.1. Must be merged tables 1 and 2.

Author’s response: Thanks for this great suggestion. The tables have been merged in the revised manuscript.

7.2. Number and percentage of all categories must be filled.

Author’s response: The percentages have been added to the revised table. Thanks to the reviewer for mentioning this important practical aspect.

7.3. Title of tables must be self-explanatory.

Author’s response: The tables has been merged and its title has been changed. Thanks for your explanation.

Comments by Reviewer #2:

Regarding the manuscript # 110421, “Relation of Coronary Artery Calcium (CAC) Score

with the Angle between Aortic Valve and Left Ventricle Inflow Long axis (AV-LV); As Cardiovascular Risk Factors", I would like to discuss some issues which I have listed below:

1. In the abstract section and Table 1, I think the mean BMI of the patients is not correct. Please clarify.

Author's response: Thanks to the reviewer for mentioning this issue. The authors really appreciate the reviewer's attention. There was a data entering error, which has been fixed.

2. In the Material and Methods section, I do not think bringing ethics ID is necessary and it would be against the blinded policy of the journal.

Author's response: Thanks for the reviewer's hint. The authors will delete the ethics ID from the manuscript.

3. Please explain how you chose these 74 patients. Was it a consecutive selection?

Author's response: Our sampling method was Consecutive considering excluding criteria (We closed the participants gathering and sampling by reaching to the number we previously calculated). Additionally, in order to reassure that the study works well, the authors have calculated the sample size again. There are not many papers investigating the CAC score and AV-LV angle correlation. Our study is the first evaluation of this correlation. The most relevant previous study we found was the Konishi et. al study on relation between CAC score and left main and left anterior descending arteries bifurcation angle and they calculated the R as 0.269 [1]. At first, we consume the relation between these two factors to be significant, hence; we used the "Participants Number for Correlation Coefficient" formula, showed below, using "r" achieving at Konishi et. al study. The result was 80.92 participants and 8 of them were excluded from the study and the final participants remained 72. However, one of the limitations of our study was the sample size and future studies with more participants would improve the result.

حجم نمونه در ضریب همبستگی (رویکرد اول)

Participitant number for correlation coefficient

$$N = \frac{\left(Z_{1-\alpha} + Z_{1-\beta}\right)^2}{u_p^2} + 3$$

$$u_p = \frac{1}{2} \ln \frac{1+\rho}{1-\rho} + \frac{\rho}{2(N-1)}$$

4. As you have mentioned, Coronary CT angiography was indicated for the patients based on the American Heart Association guideline. Please put a reference for it.

Author's response: Thanks for the reviewer's attention. The reference has been added to the revised manuscript.

5. In the exclusion criteria part of the article, there are some issues which I am listing below:

5A. Please verify what were your method and criteria for the evaluation of left ventricular dilatation and aortic regurgitation.

Author's response: The characteristics of the left ventricle and aorta of the patients has been obtained from the patients' file and echocardiography pictures of them. It has been added to the material and method.

5B. I believe, regarding the evaluation of coronary artery calcification, patients with coronary stents or patients with a history of previous CABG should also be considered in the excluded cases.

Author's response: Thanks for the reviewer's suggestion. They have been added to exclusion criteria.

6. Please provide the name of the model of the CT machine and the software used for the purpose of the evaluation of patients' images.

Author's response: 64 multi-detector *PHILIPS* CT scan machine (120 kVp, 380 mA, Collimation 64×0.625mm, increment 0.33mm, Pitch 0.2, Rotation time 0.4sec) used for Computed tomography evaluation, Brilliance 64, Philips Medical System, Cleveland, OH used for CT angiography and Heartbeat-CS Philips Healthcare has been used for CAC score. Thanks for this important suggestion. All of them have been added to the revised manuscript.

7. Please explain more about the method of calculation of the AV-LV angle.

Author's response: "On horizontal long axis plane a line was drawn from the center of mitral valve to the apex of LV. In the same plane by moving through successive sections on the section that both right and left coronary cusps are seen, a line was drawn tangential to the inferior surface of these cusps. Then the angle between these two lines was measured." This explanation has been added to the material and method, too. Moreover, the pictures have been revised.

8. In the 4th sentence in the result section, I believe "Figure 1" should be changed to "Table 1".

Author's response: The authors would like to thank the reviewer's preciseness in reading the manuscript. This typographical error is corrected.

9. In the result section, it is mentioned that 6 patients (8%) had a history of angiography evaluation while in the table it is said that 6 patients had a history of angioplasty. Please clarify and explain if stent replacement was performed for the patients or not.

Author's response: The authors would like to thank the reviewer's preciseness in reading the manuscript. This typographical error was corrected.

10. As far as I know, different orientation of aortic valve or other cardiac chambers is not a known predictor factor, as you have mentioned in the first section of the discussion. Please clarify it, and if it is so, please bringing reference/references for it.

Author's response: The Budoff et. al study has mentioned the CAC score as the most predictive single cardiovascular risk marker in asymptomatic patients [2] and it has been cited in the manuscript. However, the angle assumed to be one of the predictive factors for cardiovascular events and as per reviewer's suggestion and due to better clarification, the sentence has been changed.

11. In the discussion section, you have mentioned that CAC had significant relation only with hypertension in your study, while I think it also had a significant relation with age based on your result.

Author's response: The authors appreciate the reviewer's suggestion. The analysis of the ages and its relation has been added to the results and table.

12. The last sentence of the third paragraph of the discussion needs clarification (Line 146-147-148).

Author's response: The authors appreciate the reviewers' concise attention. We believe mentioned sentences lead to misunderstanding. Hence we removed the sentences due to complexity and the main intent has already mentioned in the paragraph.

13. In my view, reference number 26 and 27 and their results are irrelevant to the current study.

Author's response: The authors would like to thank the reviewer for this question. The authors assumed that the AV-LV angle and CAC score might play a role in blood perfusion of coronary artery. Previous studies have showed some controversial results. These two mentioned references are consistent with the hypothesis of this correlation and this shows the importance of these factors. The explanation of this hypothesis has been added to the revised manuscript.

14. Please provide a reference for the last sentence of the seventh paragraph of the discussion (Line 172-173-174).

Author's response: The authors would like to thank the reviewer for the useful comment. Three additional references have been added for the mentioned sentence.

15. Please clarify the last sentence of the eighth paragraph of the discussion (Line 183-184).

Author's response: The sentence included a typographical mistake, which has been corrected and relocated to a more relevant paragraph, which explained about the AV-LV angle and cardiac outcome. The sentence explained another study which concluded that the different orientation of the valve, has no significant effect on myocardial pressure perfusion.

16. HTN in the last sentence of the discussion should be substituted with hypertension.

Author's response: Thanks for the reviewer's suggestion. The word has been replaced.

17. In table 1 and table 2, diabetes mellitus should be corrected.

Author's response: The tables have been merged and the word has been corrected.

18. CAC should be correctly defined in table 2.

Author's response: The tables have been merged and the definition of CAC has been added to the table. Thanks for the reviewer's attention.

Comments by Reviewer #3:

The submitted manuscript dealt with a supposed relationship between the measured left ventricular inflow-outflow angle and coronary artery calcium (CAC) scoring. The major concerns are as follows:

1. The CAC is four times spelled out and AV-LV is twice spelled out through the main text; the former one is appropriately used, and the three latter ones have to be used as CAC.

Author's response: Thanks to the reviewer for mentioning this problem. The extra explanation has been deleted from the revised manuscript.

2. Please determine if history of previous coronary angioplasty/stenting or CABG was considered as an exclusion criterion.

Author's response: The authors completely agree with this comment and angioplasty or CABG were considered as exclusion criteria. Hence, both have been added to the manuscript in exclusion criteria.

3. Since CT-Angiography (CTA) is performed following contrast injection, cannot be used to measure CAC score and hence, a few statements implying the use of CTA for CAC scoring have to be corrected.

Author's response: The evaluation has been conducted in the first phase of the CTA, which is a non-contrast phase. It has been explained in the manuscript. Thanks for the reviewer's attention.

4. What was the thickness of CAC score slices?

Author's response: The thickness of the slices was 2.5mm and is explained in the manuscript. The authors want to thank the reviewer for the attention.

5. What was the CAC scoring software used for? Please clarify.

Author's response: The software was Heartbeat-CS Philips Healthcare. The software and CT machine which have been used, were added to the revised manuscript.

6. A few abbreviations and acronyms like HU, HLP, FH, MI, DM, and PET have to be spelled out in their first appearance through the main text.

Author's response: The authors would like to thank the reviewer's preciseness in reading the manuscript. All of them have been spelled out in the revised manuscript.

7. Please determine that on which phase of cardiac cycle, the CTA images were reconstructed.

Author's response: The author would like to thank the reviewer for the great comment. The CAC scores have been evaluated in non-contrast phase and the CTA images were reconstructed on 75% cardiac cycle.

8. The contrast medium type, its iodine concentration, and injection rate have to be mentioned.

Author's response: CAC score was evaluated during non-contrast phase. 320 milligram/ml Visipaque, containing 625 milligram iodixanol per milliliter was injected with a rate of 5.5 milliliter per second. On 75% of cardiac cycle, CTA images were reconstructed. This explanation has been added to the revised manuscript.

9. Please describe that how many individuals assessed the images?

Author's response: An experience radiologist examined the radiographic images. It has been added to the manuscript. The author would like to thank the reviewer for mentioning this point.

10. The city and country of SPSS vendor have to be mentioned.

Author's response: The Released 2016. IBM SPSS Statistics for Windows, Version 24.0. Armonk, NY: IBM Corp, has been used for statistical analysis. It has been added to the manuscript.

11. The technique of drawing lines and their corresponding planes are recommended to be described in a more detailed manner. The corresponding lines on provided Figures have to be demonstrated.

Author's response: The authors would like to thank the reviewer for this comment. On horizontal long axis plane a line was drawn from the center of mitral valve to the apex of LV. In the same plane by moving through successive sections on the section that both right and left coronary cusps are seen, a line was drawn tangential to the inferior surface of these cusps.

Then the angle between these two lines was measured. Figure 1 and Figure 2 illustrate the mentioned lines. We have changed and improved the figures and added the explanation to the revised manuscript.

12. In statement "Plaques volumes and platelet characteristics identified by CT angiography are important factors in coronary artery blood flow and improved vascular lesion identification." What does mean platelet characteristics?

Author's response: The authors would like to thank the reviewer for this precise comment. We changed the phrase to "Plaques volumes and characteristics" for better clarification.

13. In statement "The results of this study were inconsistent with Veer et al. study, which concluded that valve orientation did not have a significant effect on coronary artery blood flow.", it seems that the word inconsistent has to be replaced by consistent; since, the findings are in keeping the same results.

Author's response: The authors would like to thank the reviewer's preciseness in reading the manuscript. It seems that some typographical mistake has happened. The authors wanted to say "in consistent with" but the space has been deleted and the word "inconsistent" replaced. The whole sentence has replaced to a more relevant paragraph.

14. The word "statically" has to be replaced by "statistically" in statement: "In conclusion, the AV-LV angle and CAC score had no statically significant relationship with each other".

Author's response: The author would like to thank the reviewer for mentioning this point. It has been corrected in the revised manuscript.

15. The limitations of this study are recommended to be mentioned.

Author's response: The limitations have been added to the ending part of the discussion. The authors would like to thank the reviewer for this comment, which improved the manuscript.

References:

1. Konishi T, Funayama N, Yamamoto T, Hotta D, Tanaka S. Relationship between left main and left anterior descending arteries bifurcation angle and coronary artery calcium score in chronic kidney disease: A 3-dimensional analysis of coronary computed tomography. PLoS One. Public Library of Science San Francisco, CA USA; 2018;13:e0198566.

2. Budoff MJ, Achenbach S, Blumenthal RS, Carr JJ, Goldin JG, Greenland P, et al. Assessment of coronary artery disease by cardiac computed tomography: a scientific statement from the American Heart Association Committee on Cardiovascular Imaging and Intervention, Council on Cardiovascular Radiology and Intervention, and Committee on Cardiac Imaging, Council on Clinical Cardiology. Circulation. Am Heart Assoc; 2006;114:1761–91.

2 Revision 1

3 comments · 18 Dec 2020 – 3 Jun 2021

Referee 1 Reviewer

ACCEPT 18 Dec 2020

The author(s) appropriately responded to the queries.

Associate Editor

ACCEPT 18 Dec 2020

Based on the review, the author(s) appropriately responded to the queries.

Editor-in-Chief

MINOR REVISION 3 Jun 2021

Dear authors,
Your article needs Minor Revision.
Regards

3

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.

Manuscript # 110421

Relation of Coronary Artery Calcium (CAC) Score with the Angle between Aortic Valve and Left Ventricle Inflow Long axis (AV-LV); As Cardiovascular Risk Factors

In the following, the authors address all the Reviewers' comments in detail. We thank the reviewers for their valuable comments. We made every effort to incorporate changes as suggested by the Editor, which has led to significant enhancements to the paper. We used the Kowsar Publishing language editing service to make sure the scientific writing of our article met the *Iranian Journal of Radiology* standards. Changes made using **MS Word Track Change** Mode on the previous version of the manuscript.

Comments by Reviewer #1:

The author(s) appropriately responded to the queries.

The authors want to thank the reviewer for the consideration.

Comments by Reviewer #2:

This paper is ok.

The authors want to thank the reviewer for the attention.

Associate Editor's #1:

Based on the made review, the author(s) appropriately responded to the queries.

The authors want to thank the editor for the consideration.

Associate Editor's #2:

1-please replace title method with patients and methods.

Author's response: The mentioned phrase is edited in the revised manuscript, as per the reviewer's suggestion. The author would like to thank the reviewer for mentioning this point.

2-please add units for measurements and means for example: mean age of 54.41 ± 12.31 years and a mean BMI of 26.71 ± 3.89 kg/m2

Author's response: The authors would like to thank the reviewer's preciseness in reading the manuscript. The units were added as mentioned by editor.

3-please correct statically. It is statistically.

Author's response: The authors would like to thank the editor for this comment. We corrected the word to statistically.

4-i think each other should be each others.

Author's response: The mentioned issue was corrected as editor's suggestion.

5-I think the word "of" at the end of line 26 should be "for". If I am right, please correct.

Author's response: The authors agree with the editor and we corrected the manuscript. Thanks to the editor for the precise comment.

6-in line 46 and 47, the authors mentioned Coronary Artery Calcium (CAC) score could be associated with changes in coronary artery blood flow. I think it is better the author mention "higher Coronary Artery Calcium (CAC) score ……" in this sentence.

Author's response: The manuscript was corrected as per editor suggestion. The author would like to thank the reviewer for the great comment.

6-please add objective part for the paper according to journal format.

Author's response: The authors would like to thank the reviewer for this precise comment. The Objectives section was added to the manuscript.

7-please add sequential numbers for titles and subtitles: 1-background-2-objectives-3-patients and methods-3.1- Ethical consideration, ……

Author's response: Heading numbers were added as suggested by the editor.

8-line 67, 74 should be seventy four. Line 82, 64 should be sixty four. Please correct 320 in this format in line 86. And 45.3% in line 113.

Author's response: The authors would like to thank the reviewer's preciseness in reading the manuscript. The numbers were corrected as mentioned by the editor.

9-line 77, "interview with a patient" should be "interview with patient"

Author's response: We rewrite the sentences to correct the issue. Thanks to the editor for mentioning this problem.

10-line 77, "including age" should be "and included data about age ……"

Author's response: We rewrite the sentences to correct the issue. Thanks to the editor for mentioning this problem.

11-please change the "Spearman's test and Pearson's correlation test" with "Spearman's and Pearson's correlation coefficients"

Author's response: The authors want to thank the editor for the great comment. The sentence is corrected as per editor suggestion.

12-Please replace "Statistical Package for the Social Science version 24.0" by "SPSS ver. 24"

Author's response: We replace the word as editor comment. The authors want to thank the editor for raising the issue.

13-n this sentence: “Of the 74 participants, 56% were men with a mean age of 54.41 ± 12.31.” is the mean number the value for men or all patients? Please clarify in paper.

Author’s response: We rewrite the sentences as “Of 74 participants with a mean age of 54.41±12.31 years, 56% were male.” to clarify the manuscript. We want to thank the editor for the comment.

14-in line 155: Table 1 illustrates relationship of AV-LV angle with ……

Author’s response: We correct the issue as per editor suggestion.

15-in line 119, relationship is better than relation

Author’s response: We want to thank the editor for the precise comment. We used the association to clarify the manuscript better.

16-line 124, examined could be changed to evaluated

Author’s response: Thanks to the editor for the comment. We changed the word as mentioned by the editor.

17-some sentences lack good English and/or scientific writing style. I recommend the authors check whole paper in this regard. For example, this one: “This could be due to the different pathophysiology of them.” This could be rewritten as: “This could be due to their different pathophysiology.”

Author’s response: Thanks to the editor for mentioning this problem. We used the Kowsar English editing service to make sure this manuscript met the Iranian Journal of Radiology standard. English editing certificate is available in the uploaded file. In addition, the authors would like to thank the reviewer for this comment, which improved the manuscript.

18-please correct table 1 legend as: “The baseline characteristics of the patients and their relationships with AV-LV angle and CAC score”

Author’s response: Thank the editor for mentioning the issue. We changed table 1 legend as per the editor's suggestion.

3 Revision 2

1 comment · 7 Jul 2021

Editor-in-Chief

ACCEPT 7 Jul 2021

Dear authors,
Your article is acceptable for publication in IJR.
Regards