Author’s response to reviews

Title: Visualization of anomalous origin and course of coronary arteries in 748 consecutive symptomatic patients by 64-slice computed tomography angiography

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Author’s response to reviews: see over
Dear Editor,

Thank You for reviewing above cited manuscript. We appreciate Your help and the remarks that helped us to improve our manuscript. After revision according to the helpful suggestions of the reviewers we hope that it will meet the reviewers’ requirements. We again thank You for Your assistance and wish to re-submit our manuscript to be considered for publication in BMC Cardiovascular Disorders.

Please find below the changes of the manuscript according to the reviewers’ suggestions. Additionally all changes are marked in yellow throughout the main text.

Reviewer 1:

Thank Your for Your elaborated review and Your very helpful remarks. Please find below the changes made according to Your suggestions.

A. Major compulsory revisions:

1. Abstract-Background: We now clearly state that our study focus only on coronary artery anomalies of origin and further vessel course. This was also explicitly stated throughout the main text.

2. Abstract-Methods: We now mention the used classification scheme introduced by Angelini.
3. Abstract-Results: With the changes made, we hope now that the results are clear. We completely agree that the original sentence was confusing. Additionally, the results section was completely proofread and changed with the objective to be clearer. Subgroups are now defined according to the aforementioned classification scheme. This also implies that Subgroups not found in our patient population, i.e. Subgroup 1 with an absent left main trunk due to split origination of LAD and LCX are now mentioned. We think after reading Your remarks this way of presenting our findings might be more comprehensive with respect to coronary anomalies of origin and further vessel course. We hope that this modification will meet with Your approval.

4. Methods:

4.1. Informed consent is now explicitly stated in the manuscript. CT Angiography in these patients was ordered as part of the clinical work-up (mostly chest-pain) and patients gave written informed consent to undergo the CT examination.

4.2. This was a typographically mistake. We corrected this in the manuscript. The true value is up to 10mg i.v.-Betablocker. Thank Your for Your careful reading!

4.3. The reconstruction windows used were in accordance with the clinical practice of the hospital. This is now stated in the manuscript. We agree with Your remark that these are not usual windows. If necessary, additional reconstructions were employed.

4.4. No sharper kernel was used for the assessment of calcified vessels.

5. Results:

5.1. Interestingly we did not find any split or absent LM (see also 3.). This truly is unusual as this coronary artery anomaly seems to be very common. One possible explanation is that this anomaly mostly is of little clinical significance such that chest-pain symptoms are rare in this specific case. Our patient population consisted of symptomatic patients. This finding is discussed.

5.2. The anomalous course of all coronary artery anomalies investigated is now specified in Table 2 and throughout the main text. However all CAAs of origin and further vessel course showed normal termination. Further vessel course was noted to be intramyocardial (proximal LAD) in one case (see Figure 4) and in all patients with LCX arising from right sinus of Valsalva retroaortic course within the atrioventricular groove was evident.

5.3. We apologize for the trouble caused. The missing tables are now uploaded.

5.4. Discussion: Current literature, especially 64-slice MDCT studies of the same topic are now considered and discussed according to the papers provided by Reviewer 2. We hope that this will meet with Your approval.

5.5. Limitations: We added the radiation dose concerns to the limitations section as You suggested.

5.6. Conclusion: We shortened the conclusion paragraph stating that our study supports the use of MDCT for CAA identification and definition.

5.7. Figure 1: We completely agree and appreciate Your helpful suggestion. Therefore the image was changed and the acute angle of the vessel origin is highlighted and discussed in the figure legend.
10. A new figure was inserted.
11. The intramyocardial course is now marked.
12. We changed the Image and hope that anatomical relationships are clearer now. The typographically
mistake was corrected in the figure legend.

B. Minor essential revisions:
1. This was changed throughout the manuscript.
2. The sub-headings in the results section were removed.
3. Please see A.6.
4. The web-reference was controlled and accessed Oct 16 2009
5. Please see A.9.

Reviewer 2:
Firstly, we want to thank You for Your assistance in providing current literature of the same topic. All of Your
suggestions were included. Additionally we apologize for the trouble caused by the missing tables. They are
now uploaded for Your review. Thank You again for Your efforts.

Reviewer 3:
Thank Your for Your efforts in assisting the manuscript preparation. Additionally we apologize for the trouble
caused by the missing tables. They are now uploaded for Your review.

Discretionary revisions:
1. Please see answers to Reviewer 1 (A.12.). We changed the Image and hope that anatomical relation-
ships are clearer now.
2. We completely agree with Your remark. The described prevalence of coronary artery anomalies of ori-
gin and further vessel course are only true for our study population. This is now more emphasized in the
discussion section. Conclusions out of our findings for the general asymptomatic population cannot be
drawn as selection bias definitely influences our results.
3. In particular the manuscript was proofread and several sentences rephrased.

Again thank You all for Your efforts. We hope that our modifications will meet with Your approval.

All co-authors have read and agreed to the content of the manuscript. No author has financial interest in the sub-
ject matter or materials mentioned in the paper.

The study was conducted at University of Florida, College of Medicine, Department of Radiology, Shands, Jacksonville, FL, USA. Retrospective data analysis was approved by the Institutional Review Board.

Yours sincerely,

Franz von Ziegler, MD