Peer Review File

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First round of review comments

Response to Reviewer A

Reviewer's comment 1:

Abstract- L50 Add "a" before mean time

Reply 1:

Thank you for reviewing the manuscript and for your comments. This is a good point.

Changes in the text 1:

We changed the text on page 2, line 48.

Reviewer's comment 2:

L57 Delete "branched"

Reply 2:

Thank you for your comment. This is a very good point.

Changes in the text 2:

We changed the text on page 2, line 54.

Reviewer's comment 3:

Introduction- L73 delete "a" before stent-graft coverage

Reply 3:

Thank you for your comment. This is a very good point.

Changes in the text 3:

We changed the text on page 4, line 71.

Reviewer's comment 4:

Materials and Methods- Please list the primary and secondary outcomes of your study.

Reply 4:

Thanks. This is a good point. The primary outcomes of this study were in-hospital death, technical success and long-term patency rates after ZBIS- implantation and the secondary outcomes of this study were the risk factors for reinterventions.

Changes in the text 4:

We added the primary and secondary outcomes on page 5, line 96ff.

Reviewer's comment 5:

If you insist on not taking type I and III endoleaks into consideration for technical success, then please add a paragraph in the discussion section explaining your decision. You highlight your excellent technical success of 100%, but tolerated 8 type I and III endoleaks and 4 reinterventions during the same stay… This is a major issue and needs to be considered in the manuscript.

Reply 5:

Thank you for your comment. This is a very good point. The eight tolerated intraoperative endoleaks were mild and five of them were not existing anymore in the first follow-up CT a few days after ZBIS implantation. That is why we did not exclude them from technical success. However, you are right; this is unusual and needs to be explained. We added this to the limitations of this study.

Changes in the text 5:

We added the information on page 12, lines 248/249.

Reviewer's comment 6:

L93 Please explain CT as it is mentioned first

Reply 6:

Thanks. This is a good point.

Changes in the text 6:

We added the information on page 5, lines 91/92.

Reviewer’s comment 7:

L95 six instead of 6

Reply 7:

Thank you. This is a good point.

Changes in the text 7:

We made the suggested changes on page 5, line 93.

Reviewer’s comment 8:

L113-116 There are redundant parts in this sentence: Please end the sentence after “open repair”.

Reply 8:

Thanks. This is an excellent point.

Changes in the text 8:

We made the suggested changes on page 6, lines 112/113.

Reviewer’s comment 9:

L116-118 this is part of the discussion.

Reply 9:

Thanks. This is a good point.

Changes in the text 9:

We removed this sentence from page 6, lines 113-115.

Reviewer’s comment 10:

Results- L133 six-month

Reply 10:

Thank you. This is a good point.

Changes in the text 10:

We made the suggested changes on page 7, line 130.

Reviewer's comment 11:

L137 consider using "degenerative" rather than "atherosclerotic"

Reply 11:

Thanks. This is a good point.

Changes in the text 11:

We have modified our text as advised on page 7, line 134.

Reviewer's comment 12:

L 147 You state that 40 patients received EVAR for AAA treatment, but you only list 31 patients in supplemental table 1 with AAA. Did the other 9 patients receive EVAR to gain a sufficient proximal landing zone? Please explain and add this info to the text.

Reply 12:

Thank you. This is a good point. The other nine patients received EVAR to gain a sufficient proximal landing zone.

Changes in the text 12:

We have modified our text as advised on page 7, line 144/145.

Reviewer's comment 13:

L150 What is your rationale to "accept" intraoperative type I and type III endoleaks? This is unusual and needs to be explained in the manuscript.

As also commented by other reviewers, you need to explain your patients with planned reinterventions, because this is unusual in IBD implantation and one could assume that you want to optimize your number of reinterventions by calling them planned (which I of course do not assume personally). Usually you implant the IBD and if necessary the EVAR at the same time, then there would be no further scenario for a planned reintervention – anything else would be a complication. Please add an explanation to the text for your planned reinterventions or just avoid calling them that way and just treat all reinterventions the same way.

Reply 13:

Thanks. This is a good point. The eight tolerated intraoperative endoleaks I&III were mild and five of them were not existing anymore in the first follow-up CT a few days after ZBIS implantation. That is why we did not exclude them from technical success. However, you are right; this is unusual and needs to be explained. We added this to the limitations of this study.

Planned reinterventions is maybe confusing, so we now called them staged procedures.

Changes in the text 13:

We added the information on page 12, lines 248/249 and we avoided the term planned reinterventions throughout the manuscript.

Reviewer's comment 14:

Discussion- L217 ten

Reply 14:

Thank you. This is a good point.

Changes in the text 14:

We have modified our text as advised on page 11, line 213.

Reviewer's comment 15:

Tables- You have a lot of tables and supplementary tables that some readers will not have access to, although they present relevant material. Therefore, I suggest:

- Combine suppl. table 1 and table 1. Additionally, please modify supll table 1 and list patients as "aorto.iliac aneurysm" and "isolated iliac artery aneurysm" both with subdivision of "concomitant internal iliac artery aneurysm", "unilateral" "bilateral"; and "isolated internal iliac artery aneurysm" if present.

Reply 15:

Thanks. This is a good point.

Changes in the text 15:

We combined the two tables and added the missing information.

Reviewer's comment 16:

Add table 5 to figure 1 so that it makes part of the figure

Reply 16:

Thank you. This is a good point.

Changes in the text 16:

We added table 5 to the figure.

Reviewer's comment 17:

Combine table 3+suppl. table 2 "Outcome and reinterventions"

Reply 17:

Thanks. This is a good point.

Changes in the text 17:

We have modified our tables as advised and added supplemental table 2 to table 3.

Reviewer's comment 18:

Explain the info of table 4 in the text and erase this table

Reply 18:

Thanks. This is a good point.

Changes in the text 18:

We erased table 4 and modified our text as advised on page 7, line 136.

Reviewer's comment 19:

Table 3 should not be a supplementary table but a normal table.

Reply 19:

Thank you. This is a good point

Changes in the text 19:

We changed Supplemental Table 3 to Table 4.

Now we have four tables and one figure.

Response to Reviewer B

Reviewer's comment 1:

Methods- The authors should not put the number of patients (n=63) in this section. The number of patients goes in the results.

Reply 1:

Thank you for reviewing the manuscript and for your comments. This is a good point.

Changes in the text 1:

We have modified our text as advised on page 5, line 85 and on page 7, line 129.

Reviewer's comment 2:

Immediate technical success should also include absence of type I and/or III endoleak. Please add it.

Reply 2:

Thanks. This is a good point. The eight tolerated intraoperative endoleaks were mild and five of them were not existing anymore in the first follow-up CT a few days after ZBIS implantation. That is why we did not exclude them from technical success. However, you are right; this is unusual and needs to be explained. We added this to the limitations of this study.

Changes in the text 2:

We added the information on page 12, lines 248/249.

Reviewer's comment 3:

"of note our immediate technical success was high in this study", this goes into results section.

Reply 3:

Thank you. This is a good point.

Changes in the text 3:

We removed this sentence from the methods section on page 6, lines 113-115.

Reviewer's comment 4:

Results- Patient characteristics: “The patients were followed […] without iliac intervention”, this geos to the follow up section.

Reply 4:

Thanks. This is a good point.

Changes in the text 4:

We have modified our text as advised and moved this part to the “Details on reinterventions” on page 8, line 153ff.

Reviewer’s comment 5:

Patient characteristics should include cardiovascular risk factors, age, gender type of aneurysm

Reply 5:

Thank you. This is a good point. We listed the age, gender, cardiovascular risk factors, history of dialysis, etc in table 1.

Changes in the text 5:

None.

Reviewer’s comment 6:

Outcome characteristics after ZBIS: “outcome characteristics” is confusing. Did the authors mean early (or peri-operative) outcomes after ZBIS? I cannot find supplemental table 2

Reply 6:

Thanks. This is a good point. We are talking about the early perioperative outcome. We attached all the tables, I hope you can see it this time!

Changes in the text 6:

None.

Reviewer’s comment 7:

Details of re-intervention: This paragraph is confusing because it mentions 24 patients, then 28 patients. I think the authors are mixing number of patients with number of re-interventions.

Reply 7:

Thanks. This is a good point. In total 32 reinterventions were performed in 23 patients, so we now explained this better in the text.

Changes in the text 7:

We have modified our text as advised on page 8, lines 155ff.

Reviewer's comment 8:

Patency: 68 patients is incorrect. The total number of patients is 63. Authors are again confusing patients with re-interventions. Please clarify it.

Reply 8:

Thank you. This is a good point. A total of 71 ZBIS stent-grafts were implanted in 63 patients, because eight patients required bilateral ZBIS implantation.

Changes in the text 8:

We have modified the text as advised on page 8, lines 167ff.

Reviewer's comment 9:

Same thing the sentence below where there are "66 patients". Please clarify.

Reply 9:

Thanks. This is a good point. A total of 71 ZBIS stent-grafts were implanted in 63 patients, because eight patients required bilateral ZBIS implantation.

Changes in the text 9:

We have modified the text as advised on page 8, lines 167ff.

Reviewer's comment 10:

Discussion: Please remove "conventional" in the line 17 of this page.

Reply 10:

Thank you. This is a good point.

Changes in the text 10:

We have modified our text as advised on page 10, line 196.

Reviewer’s comment 11:

Authors mention “rupture” as cause of re-intervention. However, no rupture is mentioned in the results or in the tables. Please clarify it.

Reply 11:

Thanks. This is a good point. In Table 4 all reasons for reinterventions are listed and patient 5 had his second reintervention because of rupture caused by endoleak type I a.

Changes in the text 11:

None.

Reviewer’s comment 12:

Table 2. Intervention details: Why the 3 type III endoleaks were not treated?

Reply 12:

Thank you. This is a good point. The eight tolerated intraoperative endoleaks I&III were mild and five of them were not existing anymore in the first follow-up CT a few days after ZBIS implantation. That is why we did not exclude them from technical success. However, you are right; this is unusual and needs to be explained. We added this to the limitations of this study.

Changes in the text 12:

None.

Reviewer’s comment 13:

Table 3. Reintervention: Please specify “other” in the reason for re-intervention. Are the ruptures included here?

Reply 13:

Thanks. This is a good point. Other reasons for reinterventions were for example aneurysm spurium, type B dissection, infection, etc. The patient with rupture is included in the endoleak group, because this was the reason for the rupture.

Changes in the text 13:

None.

Reviewer's comment 14:

Table 4. Patency: Number of all patients is greater than 63. Authors are mixing re-intervention with patients. Please clarify it.

Reply 14:

Thank you. This is a good point.

Changes in the text 14:

We erased table 4 because of the recommendation of the other Reviewer.

Reviewer's comment 15:

Supplemental table 1. Pathology: In the maximal diameters, please spell out "AIC" and AII", is this mean diameter in millimeters? It does not make sense having the number here. Please clarify.

Reply 15:

Thanks. This is a good point. Somehow, the subtitle was lost. Now we added the missing information.

Changes in the text 15:

We have modified Supplemental table 1 and integrated it to table 1 because of the recommendation of the other Reviewer.

Second round of review comments

Reviewer's comment 1:

Abstract: Line 55-56: "Internal iliac artery repair" is not correct. I would suggest to rephrase with "Endovascular repair of degenerative iliac artery aneurysms with Zenith Branch Iliac Bifurcation device is a feasible and safe option".

Reply 1:

Thank you for reviewing the manuscript and for your comments. This is a good point.

Changes in the text 1:

We have modified our text as advised on page 2, lines 54-55.

Reviewer's comment 2:

Introduction: Line 70-71: The statement is confusing, please rephrase such as "One option to create sufficient distal landing zone is to intentionally occlude the internal iliac artery with either a plug or coil and deploy the stent graft into the external iliac artery".

Reply 2:

Thanks. This is a good point.

Changes in the text 2:

We have modified our text as advised on page 4, lines 70-72.

Reviewer's comment 3:

Line 75: "[...] branch device has therefore become [...]" Please insert commas before and after "therefore" " "[...] branch device has, therefore, become [...]"

Reply 3:

Thank you. This is a good point.

Changes in the text 3:

We have modified our text as advised on page 4, line 75.

Reviewer's comment 4:

Methods -Patients and follow up protocol: Line 94-95: Please remove this sentence. It goes to results.

Reply 4:

Thanks. This is a good point.

Changes in the text 4:

We removed the sentence on page 5, line 94.

Reviewer's comment 5:

Results: Line 133: "Mean age was 73 [64, 78] years" Please change in "73± XX"; the range

64-78 is for median.

Reply 5:

Thank you. This is a good point.

Changes in the text 5:

We have modified our text as advised on page 7, line 131.

Reviewer's comment 6:

Line 146: same as in line 133 "time was 35 [23, 49]"...

Reply 6:

Thanks. This is a good point.

Changes in the text 6:

We have modified our text as advised on page 7, line 144.

Reviewer's comment 7:

Line 174-175: please clarify the statement by adding "in patency": There was no statistical difference in patency between the two groups. Or you can rephrase: "Reintervention did not affect patency rate".

Reply 7:

Thanks. This is a good point.

Changes in the text 7:

We have modified our text as advised on page 8, line 171.

Reviewer's comment 8:

Discussion: Line 188-189: Please delete "we identified" and "we recommend" "the internal iliac arteries diameter is a significant predictor of secondary intervention, and (iv) close follow-up of patients following branched iliac artery repair is recommended"

Reply 8:

Thank you. This is a good point.

Changes in the text 8:

We have modified the text as advised on page 9, lines 183ff.

Reviewer's comment 9:

Line 228: Statistically significant difference in what?? Please clarify

Reply 9:

Thanks. This is a good point. We wanted to say, that patients with endoleaks did not need more reinterventions…

Changes in the text 9:

We have changed the text on page 10, lines 222ff.

Reviewer's comment 10:

Line 232: Please delete "that"

Reply 10:

Thank you. This is a good point.

Changes in the text 10:

We have modified our text as advised on page 10, line 226.

Reviewer's comment 11:

Line 240: How much large is large? The have a diameter cutoff. Did the authors intend for large internal iliac artery those arteries that required distal landing zone of the stent graft in the posterolateral branch of the internal artery itself? Please clarify

Reply 11:

Thanks. This is a good point. Unfortunately, we do not have an accurate cutoff and the numbers in the literature are not consistent. Your description of landing in a peripher branch of the IIA is correct and the way we do it in our center, but our findings are based on the retrospective measurements of the CTA. Hence, prospective studies are required to close this knowledge gap.

Changes in the text 11:

We modified the text on page 11, lines 236-240.

Reviewer’s comment 12:

Line 250: Please clarify how the authors defined mild versus severe type 1 endoleak

Reply 12:

Thank you. This is a good point. The definition of mild endoleak is just the subjective perception of the vascular surgeon, who is describing how much contrast agent is visible in the aneurysm sac in the intraoperative angiography.

Changes in the text 12:

We modified the text on page 11, lines 248-249.

Reviewer’s comment 13:

Conclusions: Line 259: “Enables patency rates”? Maybe the authors meant that this device is associated with high mid-term patency rate? Please clarify

Reply 13:

Thanks. This is a good point.

Changes in the text 13:

We have modified our text as advised on page 12, line 252.