Peer Review File
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Reviewer A

Q1)
Line 67/68 - …..with aortic or chronic dissecting aneurysms underwent total arch replacement (TAR) using a Frozenix J-graft.
Does it mean acute dissections and chronic aneurysms. Please clarify and clearly define the Inclusion criteria

Answer)
As a reviewer pointed out, the wording was ambiguous and misleading. We performed arch replacement with FET for thoracic true aortic aneurysm and chronic dissecting aneurysm. Acute aortic dissection, chronic dissecting aneurysm, and rupture of true aneurysm were excluded from the analysis.

Changes)
70 adult patients with true arch aneurysm and chronic dissecting aneurysm underwent total arch replacement (TAR) using Frozen J-graft (Japan Lifeline Inc., Tokyo, Japan) at Osaka Metropolitan University Hospital. Of these, 11 with chronic dissecting aneurysm and 2 with aneurysm rupture were excluded from this study. Therefore, 57 patients were enrolled in our study. Patients with acute aortic dissection were excluded from this study because compared with aneurysms, acute aortic dissection has a different pathology and requires different surgical strategies. (Page 7, lines 90-95)

Q2)
How many patients had connective tissue disorders?

Answer)
There were no patients with connective tissue disorders including Marfan syndrome.

Changes)
We added the sentence in Results section (3.1). (Page 9, lines 143,144)

Q3)
Why were the 11 chronic aortic dissection aneurysms excluded from the study
Line 82/84

Answer)
We wanted to investigate the spring back force of the FET in true aneurysms. We hypothesized that the presence of a false lumen would alter the force exerted by the stent on the true lumen.

Q4)
we chose an arch translocation anastomosis technique for total arch replacement (TAR) involving the distal anastomosis site between the left common carotid and left subclavian arteries under conventional antegrade cerebral perfusion.
Please explain the translocation anastomosis. How was the cerebral perfusion achieved with cannulation in the ascending aorta?

Answer)
The aorta is dissected between the left common carotid artery and the left subclavian artery. All three brachiocephalic artery, left common carotid artery, and left subclavian artery are dissected, and antegrade cerebral perfusion is started at the dissected end of each artery. Frozenix J-graft is inserted into the aorta with the non-stent part as short as possible and anastomosed with the 4-branch graft. After anastomosis, circulation is started from the lateral branch of the graft. The 4-branch graft is anastomosed with the left subclavian artery, the left common carotid artery, and the left brachiocephalic artery, respectively. Finally, a proximal anastomosis of the graft is completed with the aorta trimmed with sinotubular junction.

Changes)
We inserted above explanation in the Method section (2.1). (Page 7, lines 109-116)

Q5)
Write legends for the all figures to explain them.

Answer)
Figures 1A, 1B, 1C, and 1D show our arch translocation technique named the TENSE technique. These Figures are taken from “J Thorac Dis 2022;14(4):1031-1041”, which was our original paper. Would you please give us permission to use the figures?

Changes)
We added new1A, 1B, 1C, and 1D. We added the explanation in Figure legends.
Accordingly, Figures 1B, 1C, 1D, and 1E of the previous submission have been changed to Figures 2A, 2B, 2C, and 2D. Previously submitted Figures 2A and 2B were changed to Figure 3A and 3B. The previous Figures 3A, 3B, 3C, 3D were changed to Figures 4A, 4B, 4C, 4D. The previous Figure 4A, 4B , 4C were changed to Figure 5A , 5B , 5C. The previous Figure 5 is now set as Figure 5D.

Q6)
Line 118/119 - Forty percent of the patients exhibited chronic renal failure. How did they define renal failure?

Answer)
Chronic renal failure was defined as an eGFR of 45 mL/min/1.73m2 or less.

Q7)

Line 135 Please correct paraplesia

Answer
As reviewer pointed out, we mistook the spelling of paraplegia.

Change)
We amended the spelling (Page 10, line 168)

Q8)
Incidence of spinal complications was too high 4/57. How do they explain this?
Was there any association with longer stents?

Answer)
There were 3 patients with paraplegia or paraparesis (one case with paraplegia and two cases with paraparesis). All were associated with shaggy descending aorta. Each of the three cases had stent lengths of 9, 12, and 15 cm, respectively, and there was no relationship between stent length and paraplegia or paraparesis.

Q9)
Were there any precautions taken for spinal ischemia from the stents?

Answer)
Unfortunately, there were few cases of paraplegia or paraparesis in this study, and no causal relationship was found between stent length and paraplegia. However, all three cases were shaggy aorta, suggesting a relationship with paraplegia.

Changes)
We added the above comment in Results section (3.3). (Page 10, lines 168,169)

Q10)
Please specify the term ‘recent periods’ and midterm periods (line 177) for measurement

Answer)
Recent periods and mid-term periods are used interchangeably and need to be unified: “recent periods” means the most recent CT during outpatient follow-up, not the CT immediately after surgery.

Changes)
We amended the term “midterm periods” to “most recent” in Results section (3.7). (Page 11, line 211)

Q11)
Do the authors think that SG length was also important and possibly changed over period? Please add in discussion.

Answer)
If the long stent is inserted, the stent graft angle may be sharply angled because the end of the stent is in the straight portion of the descending aorta. In our study, there was no statistical difference in the rate of change in SG angle for each stent length. On the other hand, the rate of change in SG angle varied for the 9 cm stent, suggesting that insertion of a longer stent may be less likely to result in a change in positions orientation.

Changes)
We adde the sentences in discussion. (Page 12, lines 226-231)

Q12)
Please describe the role of further dissection at the distal stent site. How did they differentiate between dissection and recoil for d-SINE at the distal end?

Answer)
If dissection occurs at the stent end, it is defined as distal SINE. In this case, the dissection occurred far from the stent end, and is defined as dissection, not dSINE. The relationship between spring back force and dissection is unknown. Whether d-SINE or dissection, spring back force may be involved. Further research is needed.

Reviewer B

1. Please add the reference for the source of Figure 1 and Figure 3A.

We changed and added the reference for the source of Figure 1 and Figure 3A.

Changes)

Figure 1A, 1B, 1C, and 1D are reused with permission from AME Publishing Company. (12)

2. Please review the column heading “IQR” in Table 1, 2, as not all the data are expressed as “IQR” under this column heading.

Answer)
We corrected Table 1 and 2 according to your suggestions.