Peer Review File

Article information: https://dx.doi.org/10.21037/cdt-22-506

Reviewer A
The authors describe elements of the technique for insertion of the Thoraflex prosthesis for extended repair of the ascending aorta and aortic arch.

Specific Comments:
1. Line 62: The author quotes reference 6 as showing that the Thoraflex graft may be associated with lower mortality and morbidity that other grafts (in this study the Evita graft). In actual fact, the conclusion of that study is the opposite: “The available data suggests that mortality and morbidity are lower with the E-vita device than the Thoraflex.”

Reply 1: Noted thank you. Have amended to reflect that Thoraflex is used more frequently in the emergency setting in the studies here but not been drawn into commenting on which device is better.

2. Line 125; The author does not discuss the importance of length of the elephant trunk as a risk factor for spinal cord ischemic injury. Is the graft extended to the level of the left atrial appendage in every patient? How can zone 3 be avoided?

Reply 2: Thank you. Now incorporated into paragraph of 2 of ‘surgical techniques.

3. Line 146: The appropriate reference (11) should be inserted.

Reply 3: Now included, thank you.

4. Line 158: It should be emphasized that that the guide wire should be inserted into the true lumen in the setting of aortic dissection.

Reply 4: Noted and added.

5. Line 163: If the purpose of this manuscript (as the title suggests) is to describe the operative technique, then illlustrations of the important steps described in this section should be included.

Reply 5: Thank you. I have now incorporated the steps in illustrative figures which I hope will help.

6. Line 220: The author discusses problems that need to be addressed to improve outcomes ( management of the left subcalvian artery, reduction of stent thrombosis, as well as strategies to the reduce the risks of circulatory arrest, and the duration of cerebral perfusion) but does not address the risk of spinal cord ischemic injury, which

is the Achilles heel of this procedure when compared to the conventional elephant trunk procedure and less radical procedures to treat acute aortic dissection. In lines 20-22 the author states that "organ protection strategies and techniques to reduce the complications of neurological and renal impairment are paramount, but does not discuss them further.

Reply 6: Thank you. I've now offered some examples taken from my own practice on how I think we can improve outcomes.

7. Many of the references are incomplete.

Reply 7: Thank you and amended.

Reviewer B
The author describes the technical application of the Thoraflex Hybrid devices in the field of acute aortic dissection. The management of aortic dissection remains a challenge, also for the trained aortic surgeon, as the pathology itself generally includes acute hemodynamic instability, which increases the technical issues of such a condition. Every cardiac surgeon should be acquainted with the devices used in this setting, as the Thoraflex Hybrid Plexus 4 and the Thoraflex Hybrid Ante-flo. Indeed, even if the current trend is to create specific aortic team and tertiary centers for aortic pathology, acute aortic dissection doesn't care and may happen in every cardiac center, where the management is let to the discretion of the on-call cardiac surgeon, who may not being specialized. Therefore, such focused "surgical technique" effort is very appreciated. The manuscript is overall well-written.

1. Could the author be able (maybe with the help of the company) to provide some video materials to visualize the deployment and the technical implantation of the device? If not possible, a schematic "step by step" illustration could also be very helpful for the reader.

Reply 1: Thank you, yes as per reviewer A I have now included some illustrations which I think are very helpful to follow the narrative.

Minor comments:
2. Please include reference's numbers in the text.

Reply 2: Thank you, amended.

3. Please use the same character font in the reference list.

Reply 3: Thank you, amended.