Author’s response to reviews

Title: Concomitant aorto-right subclavian artery bypass with off-pump coronary artery bypass grafting: a case report

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Responses to comments by reviewer 2:

Comment 1: I believe you have to clarify the patency and flow status of the vertebral and carotid artery pre-operatively.

Thank you for your comment.

Carotid ultrasonographic examination revealed 50% stenosis of right internal carotid artery and subclavian steal phenomenon in right vertebral artery. And post stenotic high flow pattern was observed in proximal brachiocephalic artery.

We added these sentences in the manuscript (Page 3, line 17 to 19).

Comment 2: Where is the location of the stenotic lesions in relation with the origin of the vertebral artery and the carotid artery?

In particular, just proximal brachiocephalic artery was shown to be circumferentially calcified and 90% stenosed (Figure 1). Proximal left carotid artery and left subclavian artery were also shown to be calcified. But there were no significant stenosis at the origin of right carotid artery and vertebral artery.

We added these sentences in the manuscript (Page 3, line 13 to 16).
Comment 3: How do you expect to improve the brain perfusion after the aorto-subclavian bypass and subsequently to reduce the risk of stroke?

Preoperative computed tomography revealed severe calcification just proximal brachiocephalic artery, and carotid ultrasound examination revealed subclavian steal phenomenon at right vertebral artery. But computed tomography revealed no significant stenosis from end of the brachiocephalic trunk to origin of right carotid artery and subclavian artery, and so we expected that the aorto-subclavian bypass provided a physiological brain perfusion and reduced the risk of stroke.

We added these sentences in the manuscript (Page 6, line 4 to 8).

Comment 4: Off pump CABG is claiming reduced risk of stroke mostly if you don't touch aorta.

Our strategy for isolated CABG is off-pump technique to minimize the postoperative stroke rate and other morbidities associated with cardiopulmonary bypass.

And in the present case, ultrasound showed that the ascending aorta did not have any atheromatous plaques. Hence, we used the ascending aorta as the proximal anastomosis sites for the prosthetic graft and saphenous vein grafts.

We added these sentences in the manuscript (Page 6, line 1 to 3) (Page 6, line 12 to 14).

Responses to comments by reviewer 3:

Comment: One must grant however that initial aortosubclavian bypass could have been followed by on-pump CABG as well with the same theoretical reduction of stroke risk.

Thank you for this comment.

Our strategy for isolated CABG is off-pump technique to minimize the postoperative stroke rate and other morbidities associated with cardiopulmonary bypass.
And in the present case, ultrasound showed that the ascending aorta did not have any atheromatous plaques. Hence, we used the ascending aorta as the proximal anastomosis sites for the prosthetic graft and saphenous vein grafts.

We added these sentences in the manuscript (Page 6, line 1 to 3) (Page 6, line 12 to 14).