

## Peer Review File

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### Reviewer A

**Comment 1:** Aims of the study should be clearly and emphatically stated. “Our study aimed to provide the experience of heart surgeons as a reference” - Such an aim is unacceptable.

**Reply 1:** Thanks very much to the reviewer's advice, we have revised the relevant content.

**Changes in the text:** Lines 61-63

Our study aimed to explore the feasibility and prognosis of patients with CoA and aortic root disease undergoing the simultaneous surgical treatment of aortic root replacement and ascending-abdominal aortic bypass grafting.

**Comment 2:** Inclusion/ Exclusion criteria should be mentioned in methodology with prominence.

**Reply 2:** Thanks to the comments of the reviewer, we added the inclusion and exclusion criteria in the section of Methods.

**Changes in the text:** Lines 70-80

Patients' eligibility was assessed according to the following inclusion criteria: 1) Post-ductal aortic coarctation with pressure gradient  $> 50\text{mmHg}$  or mean differential pressure  $> 20\text{mmHg}$  was detected by echocardiography and aortic CTA; 2) Echocardiography and aortic CTA examination showed that the aortic valve was moderately or more stenosis or regurgitation, and the diameter of the ascending aorta or aortic sinus  $> 45\text{mm}$ ; 3) Patient and family agreed to undergo simultaneous surgical treatment. The exclusion criteria were as follows: 1) Patients who have undergone previous surgery for aortic root or coarctation of the aorta; 2) Patients with inflammatory arterial disease; 3) Patients with infective endocarditis or infectious aortic disease; 4) Patients with surgical contraindications.

**Comment 3:** Please define your Primary and Secondary endpoints clearly and describe results under these 2 heads.

**Reply 3:** Thanks to the comments of the reviewer, we added primary and secondary endpoints in the section of Methods.

**Changes in the text:** Lines 90-96

The primary endpoint was one-year survival. The secondary endpoints included surgical time, cardiopulmonary bypass time, aortic cross-clamp time, duration of ventilation support, postoperative complications (including respiratory failure, abdominal organ-related complications, paraplegia, etc.) and changes in differential pressure before and after surgery. All patients were followed up for at least 12 months after surgery. Follow-up information was collected via telephone, electronic medical

records or outpatient visits.

**Comment 4:** Please take professional help with language.

**Reply 4:** We received professional language help and corrected grammatical errors.

**Comment 5:** Authors have provided very limited data. The present format and data, it not acceptable for the standards of JTD.

**Reply 5:** According to the reviewer's comment, we added and improved the tables.

**Changes in the text:** Table 1-3

**Comment 6:** Please provide all the preoperative details for the patients in the table. The authors have provided only 3 or 4 variables in Table 1.

**Reply 6:** According to the reviewer's comment, we added more variables in Table 1.

**Changes in the text:** Table 1

**Comment 7:** Authors have not mentioned any postoperative complications - stroke, renal failure, pulmonary complications, wound infection, etc.

**Reply 7:** Thanks to the comments of the reviewer, we added the description of postoperative complications.

**Changes in the text:** Lines 137-139

All patients did not experience complications such as cerebral infarction, cerebral hemorrhage, renal failure, respiratory failure, paraplegia, wound infection, etc. after surgery.

**Comment 8:** What is follow-up of these patients? Please present the KM curve.

**Reply 8:** Thanks very much for the reviewer's suggestion. This study is a report of case series exploring the surgical method, the number of included cases is small, the incidence of adverse events after surgery is low. Thus the KM curve cannot be plotted. Larger clinical studies are needed to explore the effectiveness and safety of this simultaneous surgical treatment in the future.

## **Reviewer B**

**Comment:** I have to congratulate the authors for such a nice series that is dealing with a not easy pathology to be treated in adults. The paper is complete and ready to be published.

**Reply:** None.