Aortic arch replacement in an elderly patient with dextrocardia and situs inversus

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An 81-year-old male complained of a sudden pain in the right side of his chest. Using preoperative computed tomography (CT) (Fig. 1A), he was diagnosed with type A dissection associated with situs inversus totalis. Accordingly, total arch replacement was performed (Figs. 2A and B). The postoperative course was uneventful, and CT scan was good in shape (Fig. 1B).

Figure 1: CT images. (A) Preoperative three-dimensional CT image. Dextrocardia was observed preoperatively. The branches of the aortic arch were mirror-image reversed. (B) Postoperative three-dimensional CT image. Reconstructed aorta and branches were also mirror-image reversed. RV: right ventricle; Ao: aorta; BCA: brachiocephalic artery; Rt.SCA: right subclavian artery; Rt.CCA: right common carotid artery.

Figure 2: Intraoperative findings. (A) Pre-reconstruction view. Each cannula was inserted from the opposite side, in contrast to situs solitus. (B) Post-reconstruction view. RV: right ventricle; Ao: aorta; BCA: brachiocephalic artery; Rt.SCA: right subclavian artery; Rt.CCA: right common carotid artery.