Reviewer’s report

Title: Left ventricular geometric patterns in patients with type A aortic dissection

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Title: Left ventricular geometric patterns in patients with type A aortic dissection

The authors investigated relation between the maximal ascending aorta (MAA) diameter and left ventricular (LV) geometry in type A aortic dissection patients. The major finding of this study is that LV hypertrophy, both concentric and eccentric, is associated with larger MAA diameter which can be a useful predictor of aortic dissection. The manuscript is well written in general, with some questions to be pointed out.

Comments:

1. The authors concluded that LV hypertrophy (LVH), especially eccentric hypertrophy could be a 'risk factor' for aortic dissection and aortic dilatation. However, as this study included only patients who are already diagnosed as type A aortic dissection, this finding cannot be used as a predictive risk factor for upcoming aortic dissection. However, LVH and its associated aortic dilatation still can be a predictor of the patient's prognosis. Is there any analysis regarding relation between LV geometry, MAA diameter and the patient's prognosis (in-hospital and/or after discharge)?

2. In some cases, the ascending aorta has oblique direction and requires multiplanar analysis for precise diameter measurements. How many CT planes did you use for MAA diameter measurements and which one was the standard CT plane when you determined MAA diameter? Please provide detailed information about your MAA measurements.

3. Sometimes accompanied heart diseases, such as significant aortic regurgitation (AR) affects both LV geometry and aortic diameter. Also, blood pressure (BP) state can be another factor of them. Between patients with LVH and without LVH, was there any significant differences in prevalence of significant AR or BP control state?

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