



## Aortic Dissection in Pregnant Patients

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### To the Editor

Aortic dissection in pregnancy is rare but lethal. Computed tomographic angiography (CTA) remains, as the diagnostic tool while there is no reliable clinical complaints and physical findings that could help physician in making the diagnosis. Risk of radiation exposure hesitates the pregnant patients from receiving CTA and also wavers the physician from ordering the imaging study. In our own experiences, we proposed the usage of ultrasound to assist in the diagnosing process.

A 25-year-old pregnant woman at 35 gestational weeks (GWs) visited our emergency department due to chest pain and left lower jaw pain. Upon arrival, the body temperature was 35.3 °C, blood pressure was 103/48 mmHg, and pulse rate was 77 beat-per-minute. The patient appeared severely ill, with complaint of chest pain, which radiated to the back. The patient's initial physical examination was unremarkable. There was no pulse deficit. There was no significant mediastinal widening in chest radiograph. Electrocardiography and cardiac biomarker were normal. Transthoracic echocardiography showed diameter of aortic root was around 4.1 cm (Fig. 1A). Emergent CTA was performed and a surgical consultation was obtained. CTA (Fig. 1B, 1C) revealed a type-A aortic dissection, from the aortic root with re-entry at the L2 level of abdominal aorta. The false lumen involved right brachiocephalic trunk and left renal artery. The patient underwent emergent cesarean section followed by total arch grafting. Both the patient and her baby survived.

Aortic dissection in pregnancy is rare but dangerous. Previous studies had demonstrated management strategy according to gestational age and types of aortic lesion in pregnancy.<sup>1,2</sup>

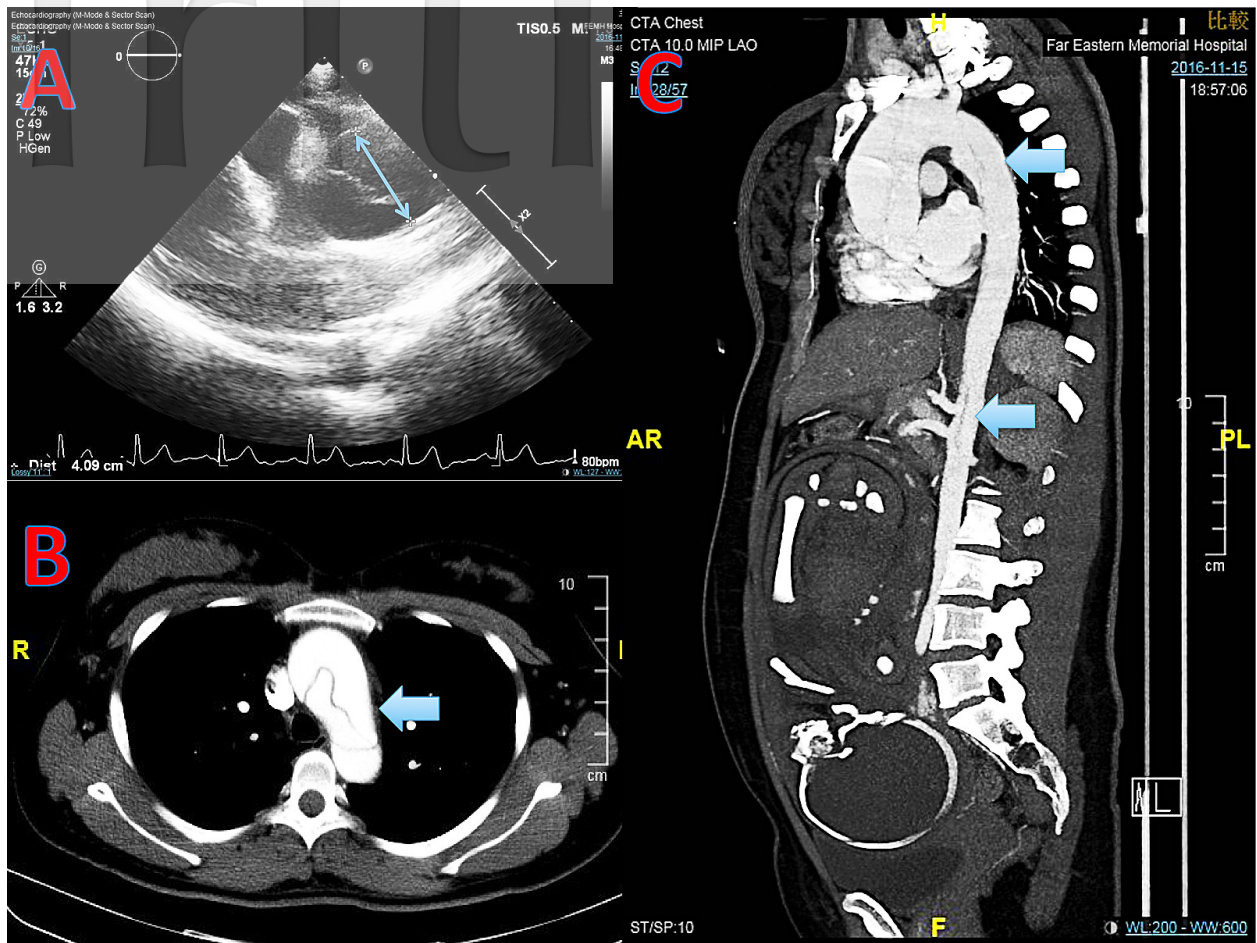
In most clinical scenario, risk of radiation exposure hesitates the patient from receiving CTA. As we know, pregnancy and connective tissue disorders are the independent risk factor for aortic dissection.<sup>3</sup> Marfan syndrome and other connective tissue disorders may cause aortic root dilatation. As a result, when a pregnant patient complains of chest pain or back pain, point-of-care ultrasound will be helpful to disclose aortic root dilatation, which mandates further CTA in diagnosing aortic dissection.

### References

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**Fig. 1.** (A) Transthoracic echocardiography at parasternal long axis view, double-headed arrow shows the diameter of aortic root. (B) Axial view of computed tomographic angiography (CTA), the arrow indicates the dissection over the aortic arch. (C) Sagittal view of CTA, the arrows show the dissections over the thoracic and abdominal aorta.