Multiple aortic aneurysms because of infective endocarditis after repair of aortic coarctation

Infective endocarditis (IE) is a rare disease in the pediatric population, and its annual incidence rate in the United States was approximately between 0.05 and 0.12 cases per 1,000 pediatric admissions according to the last pediatric American Heart Association guidelines (1). Although aneurysms with abnormal focal arterial enlargement are rare both in the ascending and the descending aorta, they are known to occur in patients with aortic coarctation with or without a history of surgical repair (2, 3).

A 6-month-old-boy was referred to our clinic owing to re-coarctation of aorta (CoA). His medical history revealed that he underwent a surgical repair of the CoA using an extended end-to-end method with lateral thoracotomy in his first month of life. After successful balloon angioplasty in the early postoperative period, he was discharged from the hospital uneventfully. He was referred to our center again with the diagnosis of IE owing to a major embolic event in the second month of his follow-up. Two-dimensional transthoracic echocardiography revealed severe aortic regurgitation, aortic cusp prolapsus, bicuspid aortic leaflet thickening, and severe re-CoA at the descending aorta. There were also mobile vegetation and multiple pseudoaneurysms in the aorta. His blood cultures (48 hours apart) were observed to contain *Staphylococcus epidermidis*, and he was diagnosed with IE according to the modified Duke criteria.

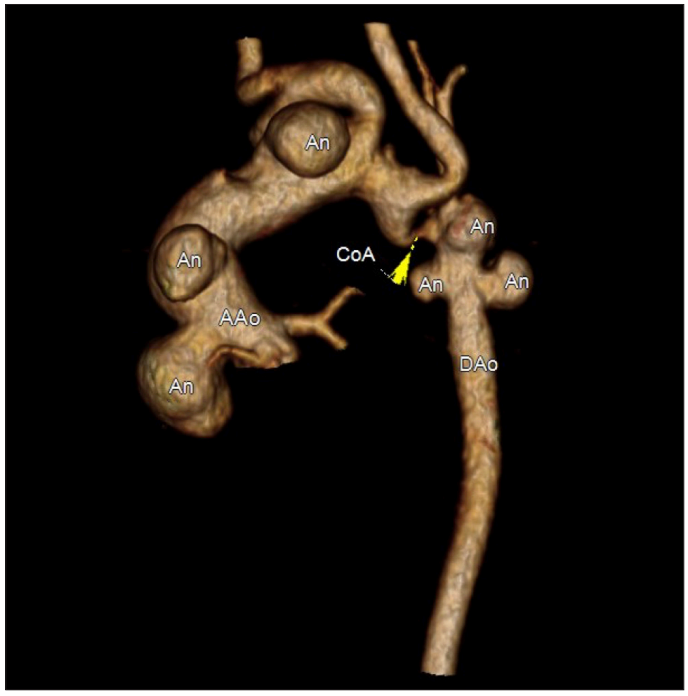

Figure 1. Computed tomography angiography showing saccular aneurysms and re-coarctation of aorta

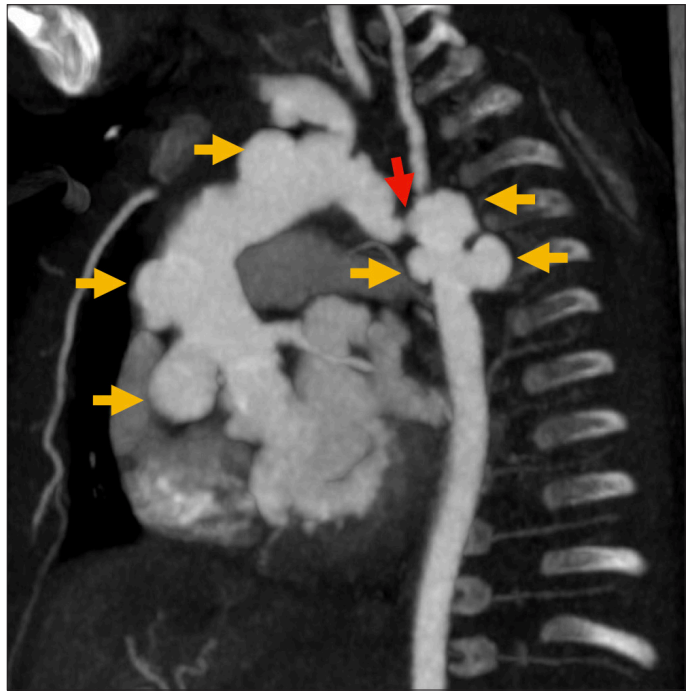

Figure 2. Computed tomography angiography showing saccular aneurysms (yellow arrows) and re-coarctation (red arrow) of aorta

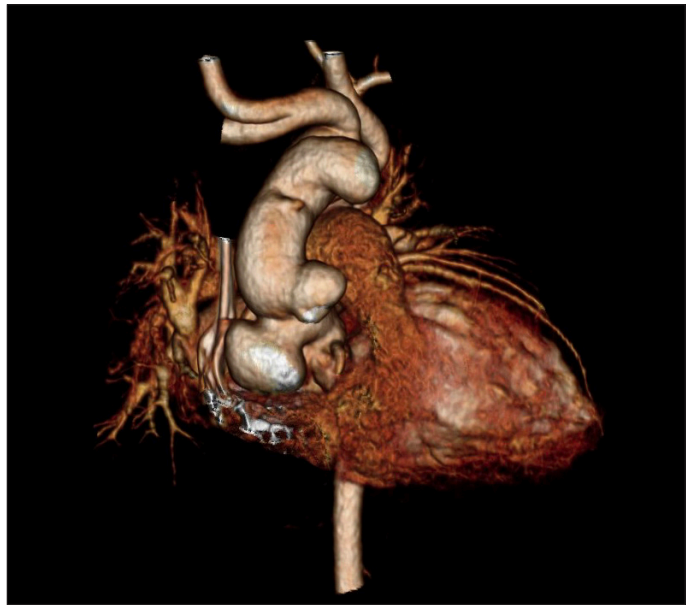

Figure 3. Computed tomography angiography demonstrating saccular aneurysms in the ascending aorta

Computed tomography angiography (CTA) showed multiple aneurysms in different parts of the ascending and descending aorta and a stenosis of the distal part of the aortic arch and re-coarctation (Fig. 1, 2). CTA demonstrated the first saccular aneurysm with a diameter of 13×18 mm located 5 mm superior to the

level of the sinotubular junction of the ascending aorta. The second aneurysm with a diameter of 11×12 mm was located 14 mm superior to the sinotubular level of the ascending aorta, and the third aneurysm with a diameter of 13×14 mm at the anterior level of the distal part of the ascending aorta (Fig. 3). CTA also showed the remaining 3 aneurysms in the descending aorta. All of them originated from the proximal part of the descending aorta with diameters of 5×6, 9×10, and 11×11 mm, respectively (Video 1).

Surgery was planned after a 4–week treatment with vancomycin, gentamicin, fluconazole, and rifampicin.

Informed consent: Written informed consent was obtained from the parents.

Video 1. Computed tomography angiography demonstrating multiple saccular aneurysms in the ascending and descending aorta

Reference

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