

Coarctation of Aorta Combined with Multiple Aneurysms

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Abstract

We reported a case of a 53-year-old patient with coarctation of aorta and multiple aneurysmatic changes on aortic arch. Enhanced CT and reconstruction revealed significant coarctation and multiple aneurysmatic dilatation. The patient underwent stent implantation and was discharged with symptoms relived. Follow-up examination progression of aneurysms, however, without symptoms.

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Conflict of interests

All authors declared that there was no conflict of interests.

Ethics statement

This manuscript and all of its content meet the ethical guidelines, including adherence to the legal requirements of the study country. The need for patient consent was waived.

Informed consent

Written informed consent was obtained from the patient and patient's family for publication of this case report and any accompanying images.

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Author contributions

Tiange Li and Siyu He prepared this manuscript. Tiange Li was responsible for images and figures in this paper. Yunfei Ling and Yongjun Qian completed surgical procedure. Yongjun Qian checked and revised the manuscript.

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Abstract

We reported a case of a 53-year-old patient with coarctation of aorta and multiple aneurysmatic changes on aortic arch. Enhanced CT and reconstruction revealed significant coarctation and multiple aneurysmatic dilatation. The patient underwent stent implantation and was discharged with symptoms relived. Follow-up examination progression of aneurysms, however, without symptoms.

A 53-year-old woman presented to the department of cardiovascular surgery with palpitation and dyspnea for one month. A 4-year history of recurrent dizziness was found through interrogation. Blood pressure of her limbs showed significant differences, her left upper limb blood pressure, similar as both lower limbs, were obviously lower than in normal, while blood pressure of right upper limb was about 155/85 mmHg, which was higher than in normal.

Vertical plane image of enhanced-contrast CT demonstrated coarctation of descending aorta and several aneurysmatic dilatation (Figure 1). Three-dimensional reconstruction of the computed tomography imaging showed multiple aneurysmatic dilatation on both the proximal of the left subclavian artery and the aortic arch. The diameter of the largest saccular aneurysm was 2.6cm, and a small aneurysmal sac was at the back side (Figure 2, *panel A~C*).

In patients with coarctation of aorta, the blood pressure of the lower extremities is relatively lower than the upper extremities. The patient had a pressure difference greater than 20 mm Hg between the upper extremities[1], indicating a combination of a left subclavian artery aneurysm. Coarctation of aorta combined with subclavian artery aneurysm was found in about 2% of patients[2], and the formation of aneurysmatic changes may due to the hemodynamic effect of the narrowing aorta. In this case, a stent was inserted to dilate the coarctation and the patient was discharged uneventfully. The re-examination was carried out 7 years later, though patient remained asymptomatic, reconstruction demonstrated a larger aneurysm of aortic arch with the diameter of 4.6cm, while the left subclavian artery aneurysm remained the same (Figure 2, *panel D~F*).

References

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Figure legend

Figure 1 Enhanced-contrast CT revealed coarctation of descending aorta (black arrow) combined with the several aneurysmatic dilatation (black star).

Figure 2 A, Enhanced-contrast CT revealed the multiple aneurysms of the aortic arch (black star). B&C, Three-dimensional reconstruction demonstrated significant dilated subclavian artery (white arrow), a small saccular aneurysm (red arrow) and the aneurysmatic dilatation of the aortic arch (black star). D~F, Images of re-examination 7 years later in the same perspective.

