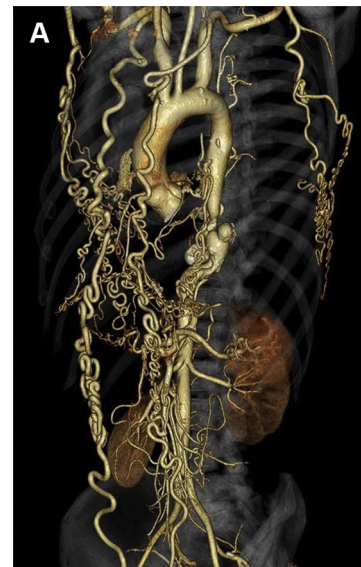


Surgical treatment of midaortic syndrome with saccular aneurysms

Masanori Ogiwara, MD, PhD, Masahiko Ozaki, MD, PhD, Yoshifumi Nishino, MD, and Takuya Miyahara, MD, PhD, *Kodaira, Tokyo, Japan*

A 54-year-old man with a history of hypertension had an abnormal finding on chest X ray and was referred to our hospital. He had been taking oral antihypertensive drugs since the age of 25. The blood test showed normal serum renal function (estimated glomerular filtration rate = 65 mL/min/1.73 m²), and the ankle brachial pressure index was 0.74 in both lower extremities. A three-dimensional volume-rendered computed tomography (CT) revealed marked stenosis of the lower descending aorta with extensive collateral vessels (Figure A/cover). CT also showed saccular aneurysms in the distal site of the stenosis, and the celiacomesenteric trunk arose above the diaphragm (B). The patient was diagnosed with midaortic syndrome (MAS) with saccular aneurysms; therefore, an open surgery was performed. Operative findings revealed that the stenosis was very hardened and adhered to the surrounding area, whereas the aneurysm was extremely fragile (C). We performed graft replacement with revascularization of the common celiacomesenteric trunk via left thoracotomy under partial cardiopulmonary bypass. A postoperative CT angiogram showed patent aortic and the common celiacomesenteric trunk bypass grafts. The patient was discharged on postoperative day 16. Pathological examination revealed severe atherosclerotic degeneration in the stenosis and a lack of medial smooth muscle in the aneurysm. The patient provided his informed consent for the publication of the details and images related to this report.



DISCUSSION

MAS is a rare condition characterized by segmental narrowing of the distal descending thoracic or abdominal aorta.¹ Patients with MAS are clinically complicated with visceral or leg ischemia.² Takayasu arteritis is one of the most common causes of MAS, which is characterized by severe narrowing of the descending aorta and extensive calcification around the stenosis.³ There are several surgical treatments for MAS including bypass, replacement, and endovascular repair.²⁻⁴ This case had no manifestation of severe ischemic symptoms but was associated with very rare saccular aneurysmal formations, which indicated treatment with graft replacement and revascularization of the common celiacomesenteric trunk for unique morphological reasons.

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From the Department of Cardiovascular Surgery, Showa General Hospital.

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Correspondence: Masanori Ogiwara, MD, PhD, Showa General Hospital, Cardiac Surgery, 8-1-1, Hanakoganei, Kodaira, Tokyo, 187-8510 Japan (e-mail: ogiwara_showa@yahoo.co.jp).

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