A 47-year-old asymptomatic woman underwent routine follow-up of Takayasu aortitis with cardiovascular magnetic resonance. She had undergone aortic valve replacement 7 years before because of aortic root aneurysm. She was normotensive and on chronic therapy with steroids and tocilizumab. In addition, she had undergone yearly clinical follow-ups and a previous cardiovascular magnetic resonance 1 year before, showing mild dilation of the postprosthetic ascending aorta and aortic arch, as well as wall thickening and inflammation of the descending aorta (Figure 1). Her current cardiovascular magnetic resonance scan disclosed a large pseudoaneurysm of the descending aorta, with initial aortic wall dissection (Figure 2 and Movie I, available in the online-only Data Supplement), together with wall thickening, inflammation, and partial thrombotic apposition.

Takayasu aortitis is an uncommon, idiopathic inflammatory disease, largely affecting the aorta and its main branches. Other than nonspecific inflammatory symptoms, it may be complicated by either ischemic symptoms attributed to stenotic lesions or by aortic wall disruption, dilation, and dissection. Diagnostic evaluation of vasculitis relies on noninvasive imaging: color Doppler ultrasound is the method of choice for evaluating epiaortic vessel involvement, whereas computed tomography and cardiovascular magnetic resonance are useful in assessing the thoracic aorta; positron emission tomography imaging allows direct visualization of the extent of vascular inflammation. Medical treatment for Takayasu aortitis includes steroids and immunosuppressive drugs; recently, many new biological agents have been discovered for refractory cases, such as the interleukin-6 inhibitor tocilizumab; the efficacy of endovascular prosthetic treatment is still controversial because of the high rate of restenosis soon after the procedure.

The patient was admitted for clinical evaluation and she underwent computed tomography (Movie II) to confirm the diagnosis and to plan an endovascular prosthetic repair of the descending aorta. Despite optimal medical therapy, the good clinical conditions and the lack of symptoms, serial noninvasive imaging proved of utmost importance to detect disease progression in this patient and to prevent potentially fatal complications.

Disclosures

None.

References

Figure 1. Parasagittal magnetic resonance view of the thoracic aorta, performed 1 year before: in steady-state free precession (SSFP) images (A), the postprosthetic ascending aorta and aortic arch were dilated, whereas the descending aorta appeared thickened and mildly dilated; in T2-weighted short-τ inversion recovery (STIR) images (B), the aortic walls appeared thickened and hyperintense because of edema and inflammation, particularly in the descending portion (arrows).

Figure 2. Parasagittal magnetic resonance view of the thoracic aorta (performed 1 year after Figure 1): in steady-state free precession (SSFP) images (A), the descending aorta now appeared dilated, with medial wall dissection and 2 large false lumen communicating with the true lumen; in T2-weighted short-τ inversion recovery (STIR) images (B) and in postcontrast late gadolinium enhancement (C) images, the aortic walls appeared thickened and hyperintense because of edema and inflammation (arrows), with thrombosis within the false lumen (asterisk).
Asymptomatic Takayasu Aortitis Complicated by Type B Dissection
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Movie Legend

**Movie 1.** SSFP (steady-state free precession) parasagittal magnetic resonance view of the thoracic aorta, showing a large double pseudoaneurism involving the descending thoracic aorta, with two false lumens communicating with true aortic lumen. Best viewed with Windows Media Player.

**Movie 2.** Post-contrast computed tomography angiographic view of the thoracic aorta, with three-dimensional volume rendering: a large double pseudoaneurism involves the descending thoracic aorta, with two false lumens communicating with true aortic lumen. Best viewed with Windows Media Player.