

# Aortic Aneurysm in Takayasu's Arteritis

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An 18-year-old woman presented with a complaint of mid-back and chest pain. On examination she was found to have equal blood pressure in both arms, but markedly decreased loudness of Korotkoff sounds in right arm relative to left arm. Examination of pulses revealed a markedly attenuated right radial pulse and right femoral pulse and a markedly accentuated right carotid pulse. Breath-hold contrast-enhanced 3-dimensional magnetic resonance angiography (CE 3D MRA) revealed an aneurysm in the proximal descending thoracic aorta (Figure 1, arrows). These findings were consistent with Takayasu's arteritis, which is an

inflammatory vasculopathy that affects the aorta and its branches and is known to cause aortic aneurysm<sup>1</sup>. Breath-hold CE 3-D MRA has been reported to be highly effective in the diagnosis of aortic aneurysm in Takayasu's arteritis. It is a quick procedure that results in high quality images of the aorta and its branches<sup>2</sup>. It uses a 3-D rapid-imaging sequence with an acquisition time of 20–30 seconds, during which patients are instructed to hold their breath. The imaging sequence is repeated before and after injection of contrast material. Each image acquired before contrast is subtracted from the image acquired after contrast and processed using a maximum intensity algorithm, resulting in reformation of the MRA in different view directions<sup>2,3</sup>.

## REFERENCES

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Figure 1. Breath-hold contrast-enhanced 3-dimensional magnetic resonance angiography reveals an aneurysm in the proximal descending thoracic aorta (arrows).