Hypertension was discovered in this 18-year-old female Caucasian patient on a routine check-up with her family physician. Within 6 months, she began to complain of headaches, dizziness, and generalized stomach aches. Further inquiry revealed a history of bilateral claudicatio intermittens. Physical examination was benign, as was evaluation for renovascular hypertension. Transthoracic echocardiography revealed no evidence of hypertrophy or aorta coarctation.

A reconstructed computed tomography angiography was carried out (Cover). Dramatic tapering of the aortic lumen is evident. In order to evaluate the enhancement of the aortic wall, T2-weighted short tau inversion recovery (STIR) magnetic resonance imaging (MRI) was performed, using the following settings: repetition time: 1558 ms, echo time: 100 ms, inversion time: 1217 ms, in-plane resolution: 0.68 × 0.68 mm, slice thickness: 8 mm, number of signal averages: 2. Strong signal enhancement of the aortic wall in STIR sequencing is displayed in (A). This corresponds to the level as identified in the computed tomography image in (B).

MRI STIR imaging is well-suited to identify inflammation of soft tissues. More importantly, it highlights regions of active or acute inflammation, thereby enhancing the diagnosis, prognosis, and treatment of the underlying pathology. In this patient, it was relevant to note the lack of active inflammation of the proximal aorta. Finally, MRI STIR imaging is non-invasive and does not require the injection of contrast agents.

The patient was diagnosed with Takayasu’s arteritis based on symptoms and imaging. To date, there has been no indication for surgical intervention, and she is doing well on glucocorticoid therapy.

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