A 56-year-old man presented with a 5-year history of exertional dyspnoea and 6 months of aggravation. The patient had a history of hypertension for 10 years and a smoking history of 30 years, with no other significant history. The patient was first admitted to another hospital and then transferred to the pulmonary vascular disease ward at our hospital due to suspected Takayasu’s arteritis. His vital signs were normal, and his blood pressure was equal in both arms. Bruits could be heard in both lung areas (bilateral chest T4 level and back T3 level) and bilaterally over the subclavian arteries. His erythrocyte sedimentation rate (2 mm/h, normal range 0–15 mm/h) and C-reactive protein levels (1.7 mg/L, normal range 0–8 mg/L) were within the normal ranges, and other tests were negative, including immune markers, hepatitis markers, liver and kidney function tests, coagulation tests, and electrolyte tests. Computed tomography (CT) revealed irregular wall-thickening of the ascending aorta (Figure 1B) and stenosis of the bilateral pulmonary arteries (Figure 1A, Video 1). Dual-energy CT imaging of both lungs was performed, and chronic thromboembolic pulmonary hypertension was ruled out. Takayasu’s arteritis was diagnosed according to the American College of Rheumatology 1990 criteria. The patient met three criteria for Takayasu’s arteritis, including development and worsening of fatigue, bruit over the subclavian, and stenosis of bilateral pulmonary arteries. Takayasu’s arteritis with pulmonary artery involvement in Takayasu’s arteritis, and pulmonary hypertension may be a complication. Patients with Takayasu’s arteritis complicated with pulmonary hypertension typically present poor prognoses. Interventional therapy has been reported to improve the haemodynamics of patients with pulmonary hypertension due to pulmonary artery stenosis caused by Takayasu’s arteritis. A proper intervention strategy is crucial to ensure the success of the procedure. Therapeutic effect evaluation is based on morphology and is conventionally performed by angiography. QFR is a new quantitative flow ratio during revascularization.
**Figure 1** Contrast-enhanced computed tomography images of the pulmonary artery and aorta, pulmonary angiography, and quantitative flow ratio value changes before and after stent placement. (A) Coronal image showing irregular wall-thickening of the ascending aorta and pulmonary arteries (red arrows). (B) Axial image showing wall-thickening of the ascending aorta and pulmonary arteries (red arrows) leading to stenosis of the pulmonary artery (green arrow). (C) Left anterior oblique position 30° of pulmonary artery angiography revealed stenosis of the left pulmonary artery with proximal and distal diameters of 13–15 mm and 15 mm length. (D) Pul-stent PAS.M 20 was implanted at the left pulmonary artery stenosis site. (G) Right anterior oblique position 20° of pulmonary artery angiography revealed stenosis of the right pulmonary artery, with proximal and distal diameters of 11–15 mm and 20 mm, respectively. (H) Pul-stent PAS.S 25 was implanted at the right pulmonary artery stenosis site. Quantitative flow ratio review revealed that quantitative flow ratio values improved after stenting in left pulmonary artery (E and F) and right pulmonary artery (I and J). LAO, left anterior oblique position; LPA, left pulmonary artery; QFR, quantitative flow ratio; RAO, right anterior oblique position; RPA, right pulmonary artery.

**Video 1** Axial contrast-enhanced computed tomography images of the chest demonstrated irregular wall-thickening of the pulmonary arteries, leading to severe pulmonary artery stenosis.

**Video 2** Pulmonary artery angiogram revealed stenosis of the left pulmonary artery in the 30° left anterior oblique position.
angiography-based tool for vascular assessment of functional severity and has become the gold standard for the diagnosis of intermediate coronary stenosis, according to current society guidelines. To our knowledge, this is the first QFR examination to be reported for a Pulmonary artery (PA) patient with pulmonary artery stenosis and pulmonary arterial hypertension. The procedure seems simple and practicable for offline pulmonary artery intervention assessment.

**Supplementary material**

*Supplementary material* is available at *European Heart Journal - Case Reports* online.

**Consent:** The authors confirm that written consent for submission and publication of this case report including images and associated text has been obtained from the patients in line with COPE guidance.

**Conflict of interest:** All authors declare that they have no financial or other interest in the product or distributor of the product.

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