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Interrupted aortic arch in a 58-year-old patient

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A 58-year-old male patient was evaluated in the cardiology outpatient setting after an episode of hypertension and atrial fibrillation. He was also an ex-smoker. Echocardiogram revealed slight left ventricular dilation with diastolic dysfunction and a systolic function in the lower normality level, as well as a rheumatic valvar disease with moderate mitral stenosis and slight aortic valve involvement, atrial enlargement and pulmonary hypertension. After an episode of acute pulmonary oedema the patient was referred for coronary catheterization. A right femoral approach was attempted and progression of the guidewire was not possible due to an interrupted aortic arch (IAA) (figure 1A), that was confirmed by right radial approach (figure 1B). The coronary arteries had no significant stenosis but the circumflex artery had an anomalous origin.

A CT-scan confirmed an interrupted aortic arch (IAA) in the descending aorta, 27 mm below the left subclavian artery, and a short, 15-mm occluded segment with calcium plaques (figure 1C; figure 1E), being the descending aorta segment irrigated by intercostal arteries. The circumflex artery ectopic origin was also better characterized, originating from the right coronary Valsalva sinus and separated from the right coronary artery (figure 1D, arrow; figure 1F).

The patient was submitted to cardiac correction surgery with the implantation of an intrapericardial Dacron conduit connecting both aortic ends. The periprocedural period was uneventful and at 1-year follow-up the patient was clinically stable with no cardiac complications.

This IAA was an incidental finding, and it may have arisen from progression of an undiagnosed coarctation of the aorta while the absence of the ductus arteriosus was probably due to a progressive occlusion.

CONFLICT OF INTEREST: none.
Fig. 1