Hypertension with coarctation of the aorta and abdominal continuous murmur

A 36-year-old woman with hypertension refractory to medical treatment was referred to our hospital because of dyspnea and atypical angina pectoris on exertion. She had two children and no problems were seen during her pregnancies. She had no history of cardiac disease. On physical examination, her blood pressures in the right and left arms were 180/110 mmHg and 170/110 mmHg, respectively. A systolic ejection murmur of grade 2/6 was heard at the left upper sternal border radiating to the interscapular region. Additionally, there was a continuous murmur and thrill in the thorax and abdomen. An electrocardiogram revealed left ventricular hypertrophy and left atrial dilatation. On transthoracic echocardiography, mild left atrial dilatation, left ventricular hypertrophy, ejection fraction of 60%, and normal systolic and diastolic dimensions. Continuous wave Doppler showed a pressure gradient of 90 mmHg distal to the subclavian artery. Coloured and continuous wave Doppler flows also showed continuous flow around the descending aorta and throughout the abdomen suggestive of collateral circulation. Doppler studies for renal artery stenosis were negative. Computed tomographic angiography of the aorta showed severe coarctation of the thoracic aorta distal to the origin of the left subclavian artery, dilated right and left internal mammary arteries and interestingly, numerous and very largely developed collaterals (Figure A-C). Coronary angiogram was normal. The patient underwent successful surgical treatment. This case illustrates the need for a detailed and careful evaluation for associated pathologies in hypertensive patients.

Figures. Computed tomographic angiography showing (A, B) significant coarctation of the thoracic aorta beyond the origin of the left subclavian artery (arrows), and (C) dilated right and left internal mammary arteries, and numerous very largely developed collaterals (arrows).