

IMAGES IN INTERVENTION

## A Patient With Kawasaki's Disease and Increasing Breathlessness



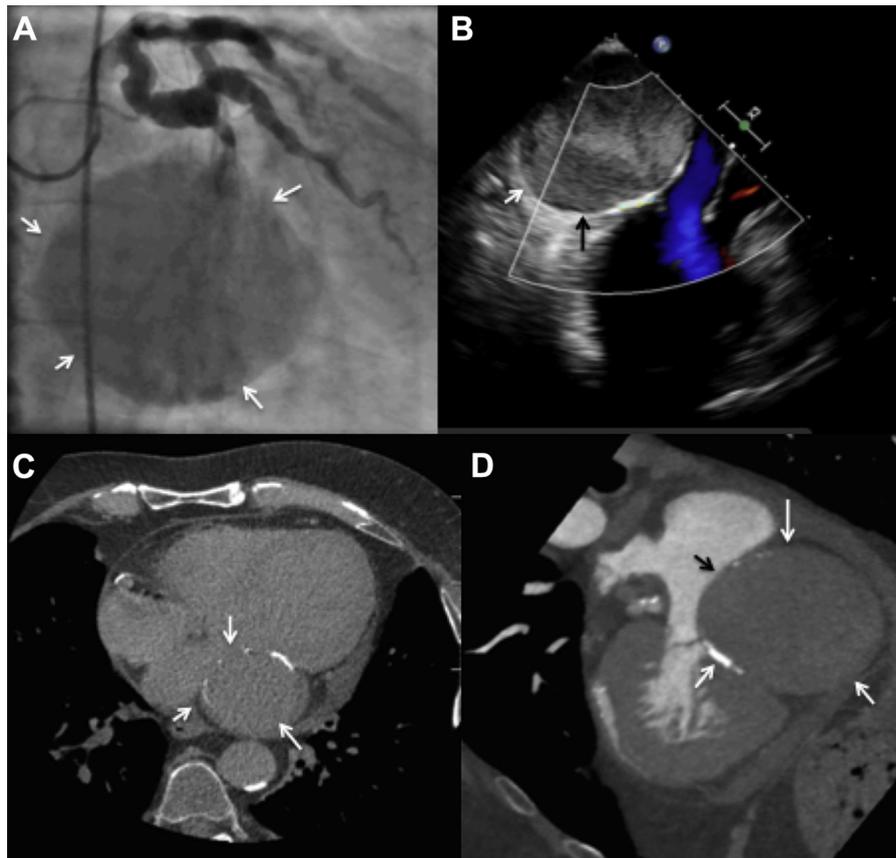
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**K**awasaki disease (KD) is an acute systemic vasculitis of unknown etiology that affects mainly children. Treatment is aimed at suppressing vascular inflammation during the acute phase of illness and preventing long-term myocardial ischemia. Cardiovascular events affect the long-term outcome. Aneurysm formation is more common in childhood, and up to 50% of aneurysms regress within 2 years, whereas stenotic lesions are progressive over time. Endothelial dysfunction, platelet activation, and sluggish flow in the vessel affected by aneurysm create a highly thrombogenic environment.

A 65-year-old gentleman was diagnosed with KD at the age of 42 years after presenting with myocardial infarction. He is a Caucasian farmer, does not recollect any previous illness resembling KD, but he was treated with long-term steroids, warfarin, and aspirin. He was treated with stenting to the intermediate coronary artery in 2012 and was also found to have a large aneurysm of the dominant left circumflex coronary artery, which was monitored with serial computed tomography (CT) scans. Recently, he

presented with worsening breathlessness and chest pain on minimal exertion. The CT scan demonstrated progression in the size of the aneurysm, measuring  $7.1 \times 5.5$  cm (previously  $6.4 \times 5.1$  cm, in 2013), with associated extrinsic compression of the left atrium. Echocardiography demonstrated sluggish flow in the aneurysm (**Figure 1A**, **Online Video 1**) and also confirmed compression of the left atrium (**Figure 1**), without any interference of mitral valve inflow. Coronary angiography demonstrated a large aneurysm arising in the circumflex coronary artery, with poor flow into the distal vessel and significant disease in the distal left anterior descending coronary artery. In view of the enlarging aneurysm with mass effect and coronary disease, he underwent successful surgical repair, by over-sewing of the aneurysm and coronary artery bypass grafting.

Progressive coronary aneurysm dilation in adult patient with KD is rare, but when present, complications can arise, not only from intravascular thrombosis, but also as a result of the mass effect on nearby structures.

**FIGURE 1** Different Imaging Modalities Demonstrating Circumflex Aneurysm

Coronary angiography (A), transesophageal echocardiography (Online Video 1) (B), and computed tomography (CT) scan (C and D) defining the aneurysmal segment of the left circumflex coronary artery. CT scan demonstrated calcification in the aneurysm wall and compression of the left atrium, whereas echocardiography demonstrated a normal mitral in-flow pattern. Arrows indicate the aneurysmal segment of the left circumflex artery.

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**APPENDIX** For supplemental videos, please see the online version of this article.