Coronary Artery Aneurysms in a 15-Year-Old Boy

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A 15-year-old boy with a history of Kawasaki disease presented after an exercise nuclear stress test (performed before a contemplated weight-loss program) revealed a reversible inferolateral and apical defect (left ventricular ejection fraction, 0.53). A coronary angiogram showed the right coronary artery with an 11.5 × 6 × 5-mm proximal aneurysm, proximal 50% stenosis, and mid 70% stenosis; the left anterior descending coronary artery (LAD) with a proximal 60% stenosis followed by an aneurysm; and the left circumflex coronary artery with a small aneurysm of the proximal segment (Fig. 1). We placed drug-eluting stents in the proximal and mid right coronary artery and in the proximal LAD lesion (Fig. 2). The patient did well and tolerated cardiac rehabilitation. A stress test one year after the procedure revealed no inducible ischemia.

Comment

Kawasaki disease is an acute vasculitis that afflicts children; coronary artery aneurysms (CAAs) are a known sequela.[1,2] Our patient's largest aneurysm (>8 mm) qualifies as a "giant" CAA. In an analysis of 76 similar patients,[3] the survival rates were 88% at both 20 and 30 years; deaths were caused by ischemic events. Patients who develop substantial stenotic lesions need either percutaneous coronary intervention or coronary artery bypass grafting, depending on their coronary anatomy.[2,3] Surgery is typically recommended for these conditions: obstruction of the left main or more than one major coronary artery, proximal LAD obstruction, compromised collateral flow, or recurrent myocardial infarction.[4]

To reduce the risk of CAAs, patients with Kawasaki disease should initially be treated with aspirin and intravenous immunoglobulin G.[4] After the diagnosis of Kawasaki disease has been established, the risk level and long-term medical therapy should be determined. Noninvasive coronary imaging can be performed first, followed (if neces-

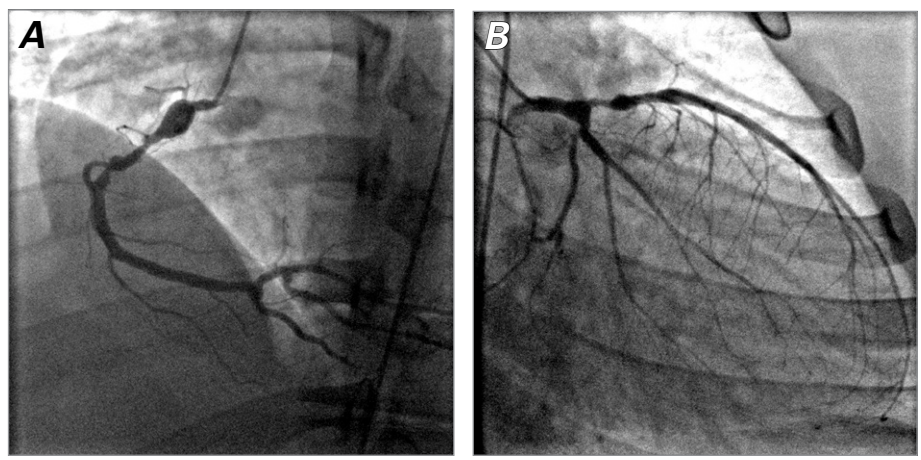

Fig. 1 *Diagnostic coronary angiograms.* ***A****) The right coronary artery has a large proximal aneurysm and hemodynamically significant mid-vessel stenoses.* ***B****) The left anterior descending coronary artery has a proximal stenosis and aneurysm; the left circumflex coronary artery has a small proximal aneurysm.*

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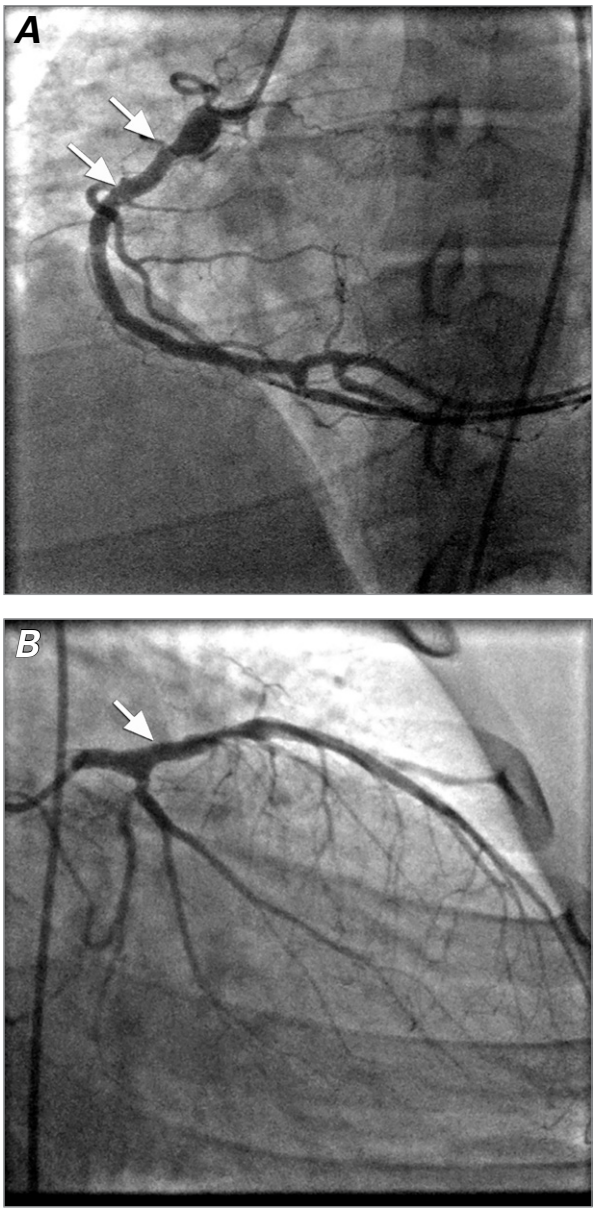

Fig. 2 *Coronary angiograms after drug-eluting stent placement.* ***A****) The right coronary artery shows improvement of the stenoses (arrows).* ***B****) The left anterior descending artery shows no residual stenosis (arrow).*

sary) by coronary angiography 6 to 12 months after the inflammatory period.[4]

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