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IMAGES IN PEDIATRIC CARDIOLOGY

Giant Coronary and Systemic Aneurysms of Kawasaki Disease in an Infant

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Case Report

Kawasaki disease (KD) was diagnosed in a 4-month-old male infant after 4 days of fever, rash, and bulbar conjunctivitis. He received two doses of intravenous immunoglobulin (IVIG), high-dose oral acetylsalicylic acid, and three doses of methylprednisolone within in the first week of illness for persistent fever. During the third week of his illness, echocardiogram showed giant aneurysms at the origin of the right coronary artery (17 mm) and at the bifurcation of the left coronary artery (9 mm). Anticoagulant therapy was started. At 9-month follow-up, the child was clinically well, and there were no ST-T wave changes on electrocardiogram. Aortography showed a giant aneurysm (19 × 19 mm) at the origin of the right coronary artery and another aneurysm (9 × 17 mm) distally (Figs. 1 and 2). The left coronary artery showed a large aneurysm (10 × 6 mm) at the bifurcation (Fig. 1). There was no evidence of stenosis in the right or left coronary artery. Subclavian artery injections showed large aneurysms in both the right (8 × 12 mm) and left (12 × 24 mm) brachial arteries (Fig. 3). Abdominal and carotid angiography were normal. At present, the infant is being maintained on low-dose aspirin and anticoagulant therapy. The international normalized ratio (INR) has been maintained between 2 and 2.5 (Fig. 4).

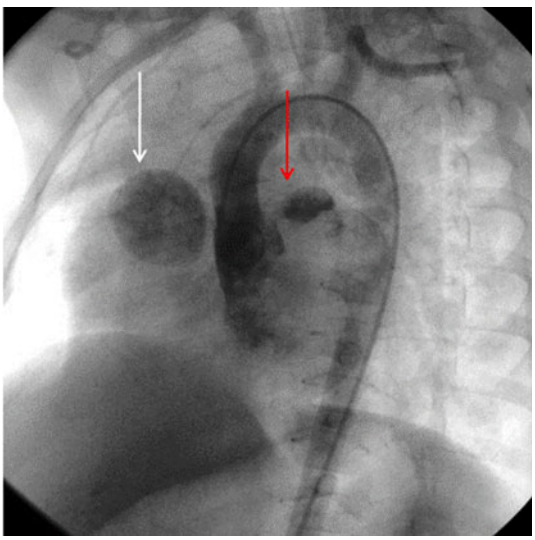

Fig. 1 Aortography showing a large aneurysm at the origin of the right coronary artery (*white arrow*) and a large aneurysm at the bifurcation of the left main coronary artery (*red arrow*). (Color figure online)

KD is an acute multisystem vasculitis of unknown etiology that predominantly affects small- and medium-sized arteries. Fifteen percent of KD occurs in patients from 6 months to 4 years of age and often presents as the incomplete form [1]. Giant aneurysms (diameter > 5 mm) are considered a high risk factor for the long-term development of stenotic coronary lesions [2]. Administration of IVIG within 10 days of illness decreases the incidence of giant aneurysms [3]. The risk of coronary artery aneurysms is higher for patients who do not respond to the first dose of IVIG, as happened in our case [3]. Systemic artery aneurysms have been reported to occur in 2% of patients with KD, and they are often associated with coronary aneurysms [4].

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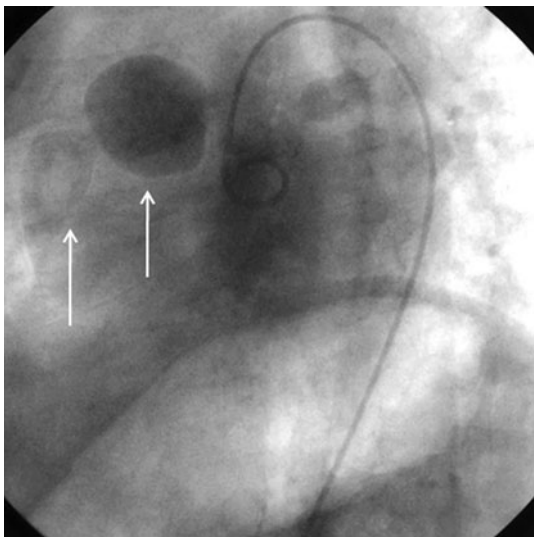

Fig. 2 Aortography showing a large aneurysm at the origin of right coronary and another aneurysm distally (*arrows*)

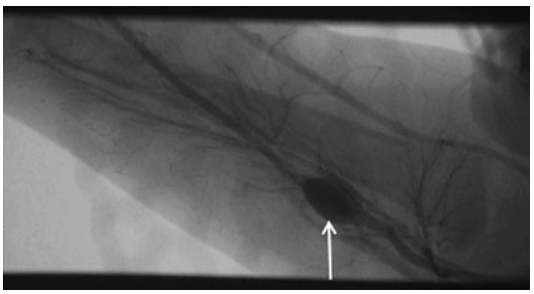

Fig. 3 Right subclavian artery angiography showing an aneurysm in the brachial artery (*arrow*)

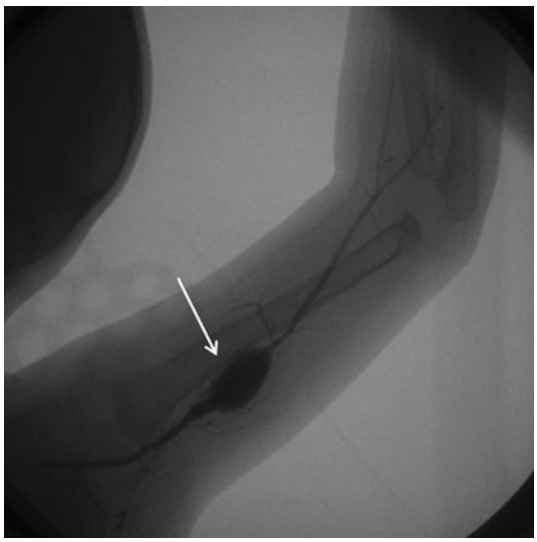

Fig. 4 Left subclavian artery angiography showing an aneurysm in the brachial artery (*arrow*)

References

1. Kyung-Yil L, Ja-Hyun H, Ji-Whan H, Joon-Sung L, Byung-Churl L, David B (2006) Features of Kawasaki disease at the extremes of age. J Paediatr Child Health 42:423–427
2. Mueller F, Knirsch W, Harpes P, Prêtre R, Valsangiacomo Buechel E, Kretschmar O (2009) Long-term follow-up of acute changes in coronary artery diameter caused by Kawasaki disease: risk factors for development of stenotic lesions. Clin Res Cardiol 98(8):501–507
3. Newburger JW, Takahashi M, Gerber MA et al (2004) Diagnosis, treatment, and long-term management of Kawasaki disease. A statement for health professionals from the Committee on Rheumatic Fever, Endocarditis, and Kawasaki Disease, Council on Cardiovascular Disease in the Young, American Heart Association. Circulation 110:2747–2771
4. Cura MA, Haskal JZ, Weintraub J, Benvenisty A (2004) SIR 2004 film panel case: systemic artery aneurysms in Kawasaki disease. Vasc Interv Radiol 15(9):1009–1011