Chronic active Epstein–Barr virus infection complicated with multiple artery aneurysms

Satoshi Nishimura*, Shoichi Ehara, Akihisa Hanatani, and Minoru Yoshiyama

Department of Cardiovascular Medicine, Osaka City University Graduate School of Medicine, 1-4-3 Asahi-machi, Abeno-ku, Osaka 545-8585, Japan

*Corresponding author. Tel: +81 6 66453801; Fax: +81 6 66466808. E-mail: satoshirx8@yahoo.co.jp, a96m050@med.osaka-cu.ac.jp

A 26-year-old woman was admitted to our hospital to undergo allogeneic peripheral blood stem cell transplantation for the treatment of chronic active Epstein–Barr virus (CAEBV) infection.

Transthoracic echocardiography showed hypokinetic inferior, posterior, and lateral left ventricular (LV) walls. Coronary angiography demonstrated large aneurysms in the proximal left (LCA) and right coronary arteries (RCA). The LCA aneurysm was located in the bifurcation of the left anterior descending (LAD) and left circumflex arteries (LCx), and the LCx was occluded at the diverging point from the left main coronary artery. The RCA was occluded by the distal portion of the aneurysm. Distal vessels to the occlusion sites of the LCx and RCA presented collateral vessels from the LAD (Panels A and B). Late gadolinium enhancement on cardiac magnetic resonance (MR) imaging revealed subendocardial enhancement within the LV walls, which corresponded with the occluded LCx and RCA territories (Panels C and D). Further screening was performed with MR angiography, which showed bilateral vertebral artery aneurysms (Panel E). Five months later, asymptomatic occlusion was also found in the left vertebral artery (Panel F).

Rarely, the primary infection of Epstein–Barr virus in T or natural killer cells induces CAEBV infection, a fatal syndrome characterized by infectious mononucleosis-like chronic symptoms that affect both children and young adults. Patients with CAEBV often develop multiple artery aneurysms, which are clinically silent until they rupture or cause organ damage. Therefore, screening for cardiovascular complications is indispensable in patients with CAEBV.