

Multimodality diagnostic imaging of a giant coronary artery aneurysm

Dev koroner arter anevrizmasının değişik yöntemler ile görüntülenmesi

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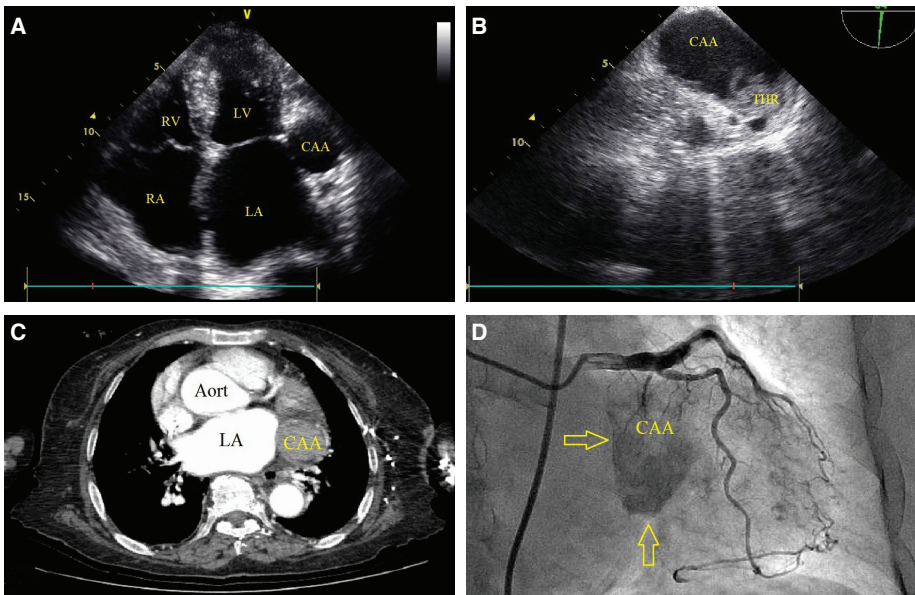
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A 78-year-old woman with a history of hypertension and end-stage renal disease was admitted to our hospital for routine control. On physical examination, blood pressure was 145/90 mmHg and pulse rate was 100 beats/min. The electrocardiogram revealed sinus tachycardia and laboratory findings were unremarkable except for kidney function tests. Transthoracic echocardiography (TTE) revealed normal left ventricular systolic

functions with moderate concentric hypertrophy. The apical four-chamber view revealed a spherical cavity-like mass of diameter of 3.5 cm adjacent to the left atrioventricular groove (Fig 1a). Subsequently, transesophageal echocardiography (TEE) was performed in order to identify the cystic mass, which contained thrombotic material (Fig 1b). Enhanced computed tomography (CT) angiography showed a giant, par-

tially-thrombotic coronary artery aneurysm (CAA) (Fig 1c). Diagnostic coronary angiography confirmed the giant CAA (27x42 mm in size) arising from the proximal segment of the circumflex coronary artery (Fig 1d). Covered stent implantation was offered promptly, but refused by the patient. Presently, she is under conservative treatment with warfarin and follow-up observation. CAA is defined as a dilatation of the coronary artery that is more than 1.5 times the diameter of normal adjacent segments. Giant CAAs are extremely rare anatomic occurrences. Although there is no uniform definition, they are variously defined as more than 20 to 50 mm in size. Etiological factors include atherosclerosis, Kawasaki disease, congenital malformations, chest trauma, connective tissue diseases, autoimmune diseases and coronary interventions. Although the present patient was asymptomatic, a giant CAA may cause coronary artery rupture, thromboembolism or haemodynamic problems related to compression. A variety of imaging techniques have been used to view giant CAAs. Although noninvasive imaging methods including echocardiography, computed tomography, and magnetic resonance imaging can detect some CAAs, coronary angiography remains the gold standard and provides important information on the size, shape, location, and number of aneurysms.



Figures– (A) Transthoracic echocardiography apical four-chamber view showing a spherical cavity-like mass of diameter of 3.5 cm adjacent to the left atrioventricular groove. (B) Transesophageal echocardiography revealed a cystic mass which contained thrombotic material. (C) Enhanced computed tomography angiography showed a giant, partially-thrombotic circumflex coronary artery (Cx) aneurysm. (D) Diagnostic coronary angiography confirmed the giant CAA arising from the proximal segment of the Cx. (CAA: Coronary artery aneurysm; LA: Left atrium; LV: Left ventricle; RA: Right atrium; RV: Right ventricle; THR: Thrombus).