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IMAGE IN CARDIOLOGY

Multiple giant coronary aneurysms: A rare form of coronary artery disease

Múltiplos aneurismas coronários gigantes: uma forma rara de doença arterial coronária

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A 63-year-old male, with type 2 diabetes, hypertension and atrial fibrillation, presented with complaints of typical angina. The electrocardiogram and transthoracic echocardiogram were unremarkable. He began antianginal drugs and was referred for an elective coronary angiography that **showed** multiple giant aneurysms on both coronary arteries (Figure 1, panels A and B). A computed tomography coronary angiography was performed confirming the presence of multiple coronary aneurysms, the largest on the right coronary artery (RCA, 45 mm), followed by the left anterior descendant (LAD, 17 mm) and circumflex (Cx, 15 mm) arteries (Figure 1, panel C). A cardiac MRI scan was performed, showing the presence of coronary aneurysms in the cine sequences (Figure 1, panel D) with thrombi in the cavity of the aneurysms seen in the late gadolinium enhancement sequences (Figure 1, panel E); interestingly, no myocardial infarctions were noted.

Giant coronary aneurysms are extremely rare.[1] Atherosclerosis is the main cause (50%); however, when both coronary arteries are involved, Kawasaki's disease is the most frequent etiology. Our patient denied having had Kawasaki's disease, and main vasculitis disorders were ruled out (specifically, Takayasu arteritis, polyarteritis nodosa, systemic lupus erythematosus and rheumatoid arthritis); atherosclerosis remained a probable cause.

The term ''giant'' applies when the dilated segment is either >8 mm in diameter or >400% of the diameter of the adjacent segments,[1] as shown here. Although the natural history is unknown, severe complications can emerge.[2] The case was discussed by the heart team and cardiac surgery was considered the best course of action**. The patient is currently awaiting heart surgery.**

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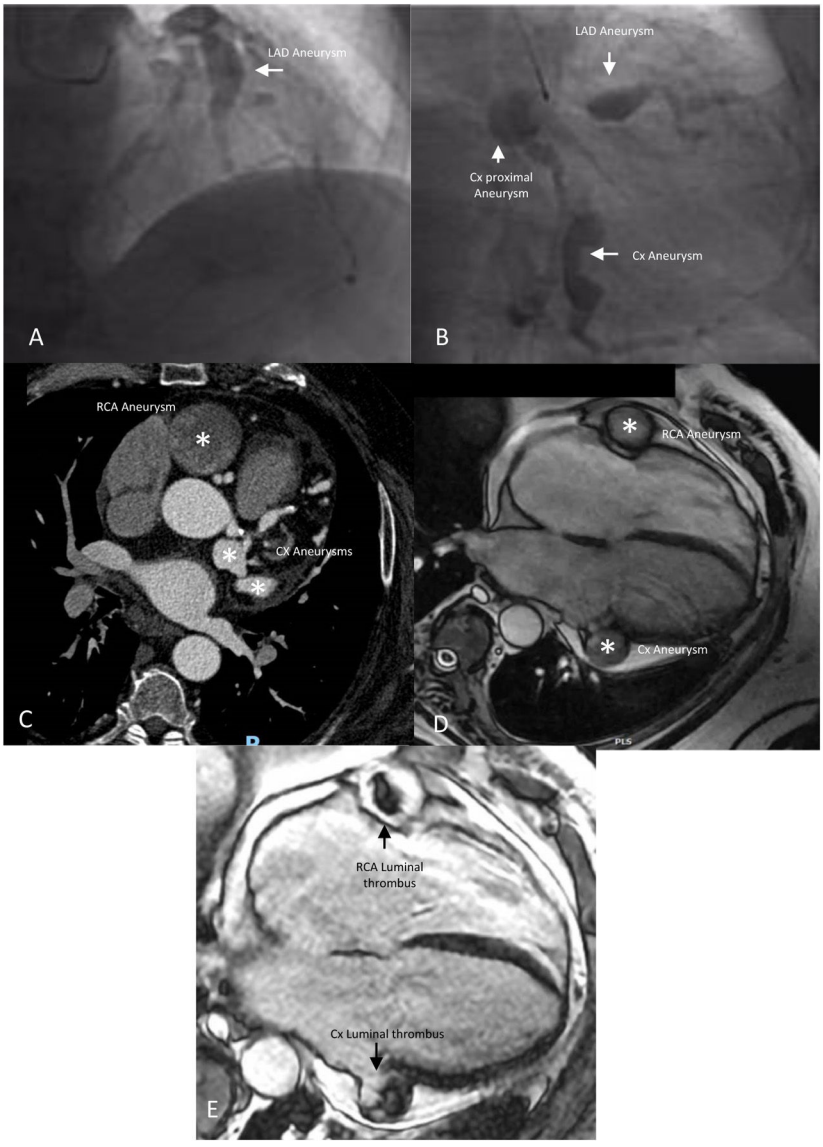

Figure 1 Giant coronary aneurysms seen by invasive coronary angiography (panels A and B), computed tomography coronary angiography (panel C) and cardiac MRI bSSFP cine (panel D) and late gadolinium enhancement (panel E), the latter revealing thrombi in the circumflex and right coronary arteries. bSSFP: balanced Steady-State Free Precession; Cx: circumflex artery; LAD: left anterior descendant artery; RCA: right coronary artery.

Conflicts of interest

The authors have no conflicts of interest to declare.

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