

# An Unusual Cause of ST-Segment Elevation Myocardial Infarction



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**G**iant coronary artery aneurysm (CAA) is defined as dilatation of the coronary artery that is more than 1.5 times the diameter of normal adjacent segments. The most common cause of CAA in adults is atherosclerosis.

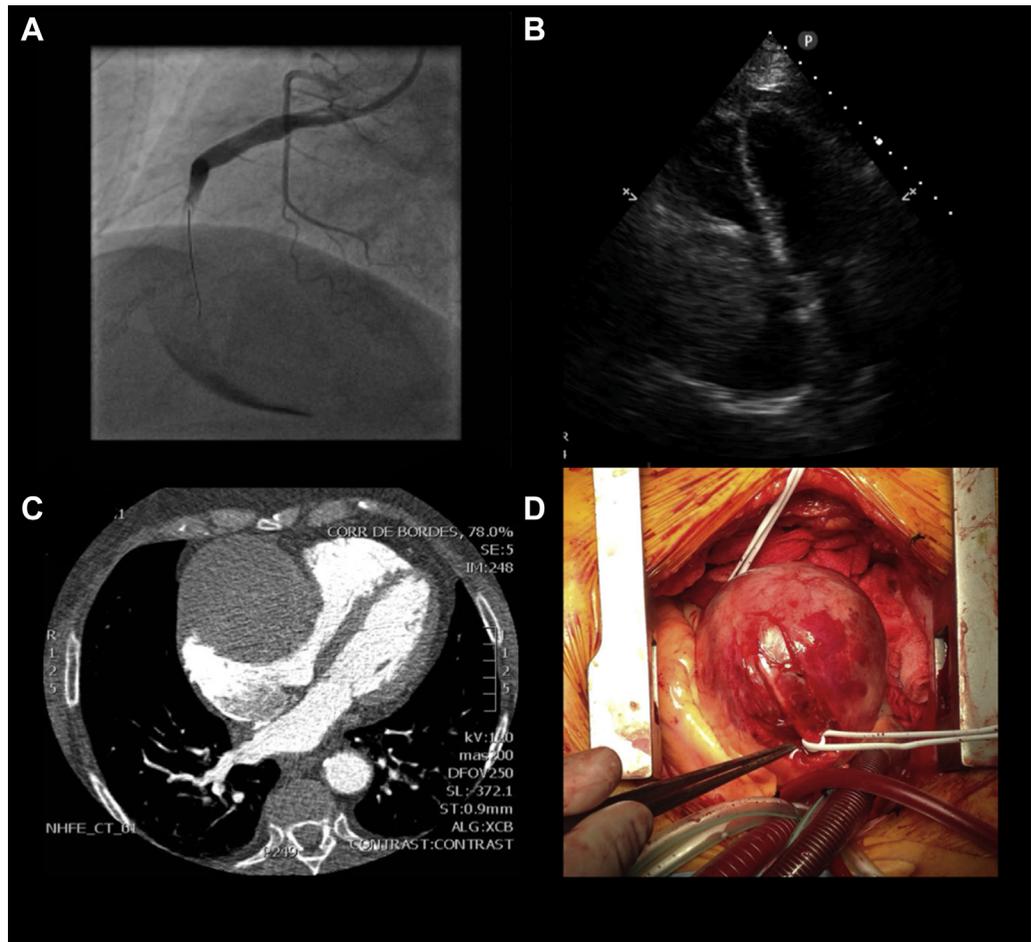
A 71-year-old woman with a history of arterial hypertension underwent urgent coronary angiography for inferior ST-segment elevation myocardial infarction. Angiography showed total occlusion of the mid right coronary artery. Several crossing attempts with a hydrophilic wire resulted in contrast extravasation to a cavity that initially seemed to be the pericardial space (**Figure 1A**). At that moment, the procedure was stopped and echocardiography was performed, showing a cystic-like mass compressing the atrial and ventricular right chambers (**Figure 1B**). Coronary computed tomographic angiography revealed a  $9 \times 9$  cm mass, with no contrast capture in the arterial phase and with retention of contrast in the venous phase (**Figure 1C**). It was described as a vascular mass with active bleeding, so urgent surgery was performed. The mass resulted in a

thrombosed giant right CAA, which was responsible for the ST-segment elevation myocardial infarction (**Figure 1D**, **Online Video 1**). Both the proximal and distal ends of the aneurysm were ligated after bypassing the distal right coronary artery. The patient progressed favorably during hospitalization, with no complications until discharge.

The majority of patients with giant CAAs are asymptomatic, but they may present with angina pectoris, myocardial infarction, sudden death, or other complications. No optimal management strategy is established for patients with giant CAAs. Surgery is likely the preferred option in asymptomatic patients because of the risk for complications, as this case illustrates.

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**FIGURE 1** Thrombosed Giant Coronary Artery Aneurysm Causing STEMI

**(A)** Total occlusion of mid right coronary artery and contrast extravasation. **(B)** Echocardiography showing a mass compressing the atrial and ventricular right chambers. **(C)** Coronary computed tomography revealed a 9 × 9 cm mass. **(D)** Giant artery aneurysm of right coronary artery. See [Online Video 1](#).

**KEY WORDS** giant coronary artery aneurysm, STEMI

**APPENDIX** For a supplemental video, please see the online version of this article.