

Images in
Cardiovascular Medicine



A Case of a Long-term Survivor of Myocardial Infarction With Extensive Dystrophic Myocardial Calcification

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OPEN ACCESS

Received: Jul 13, 2022

Revised: Aug 10, 2022

Accepted: Sep 7, 2022

Published online: Oct 13, 2022

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Funding

The authors received no financial support for the research, authorship, and/or publication of this article.

Conflict of Interest

The authors have no financial conflicts of interest.

A 91-year-old woman with a history of myocardial infarction (MI) 36 years ago presented with aggravating dyspnea for one week. Since her diagnosis of MI, she has been prescribed guideline-directed medical therapy (GDMT), including an anti-platelet agent, beta-blocker, renin-angiotensin-aldosterone system inhibitor (RAASi), nitrate, and statin. Chest radiography revealed cardiomegaly and pulmonary edema with pleural effusion. There was a large, well-demarcated, spherical calcified mass (**Figure 1A**). Computed tomography showed an extensive, curvilinear myocardial calcification along with the apical left ventricle (LV) aneurysm (**Figure 1B**). Transthoracic echocardiography showed dilated LV with apical aneurysm complicated by severely decreased LV systolic function (LV ejection fraction=19%) (**Supplementary Videos 1-3**). Coronary angiography performed 10 years before presentation showed the chronic total occlusion at the ostium of the left anterior descending artery with an absence of other epicardial coronary artery stenoses (**Figure 2**). The patient was diagnosed with acute on chronic systolic heart failure. After intensive medical care with diuresis and

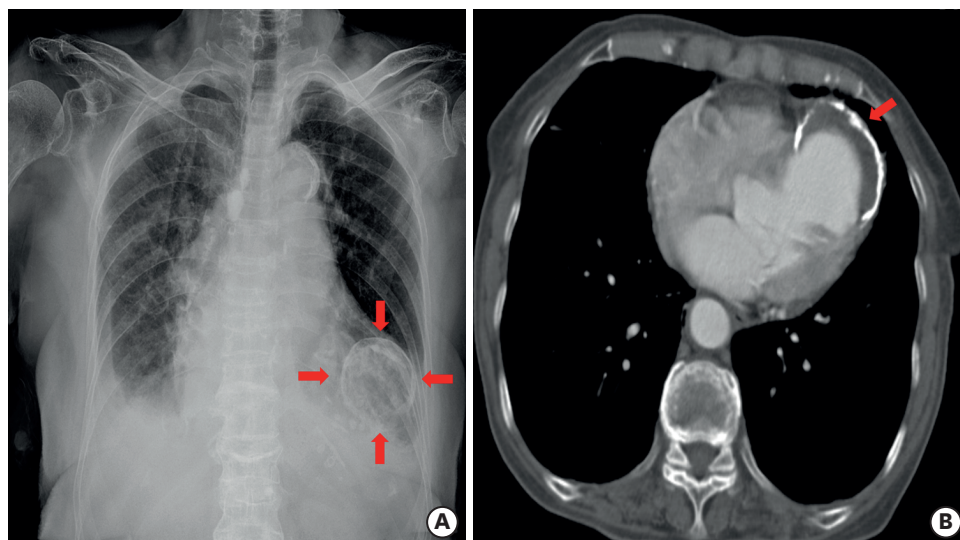


Figure 1. Radiographic images. (A) Chest X-ray showed a large, well-demarcated, spherical calcified mass (red arrows) at LV. (B) Chest computed tomography demonstrated an extensive myocardial calcification (red arrow) along with the aneurysm of LV. LV = left ventricle.

Data Sharing Statement

The data generated in this study is available from the corresponding author upon reasonable request.

Author Contributions

Conceptualization: Lee M, Park MW;
Supervision: Lee M; Writing - original draft: Kim DY; Writing - review & editing: Kim DY, Lee M, Park MW.



Figure 2. Coronary angiography images. (A) Coronary angiography showed the chronic total occlusion at the ostium of the left anterior descending artery (red arrow). The left circumflex coronary artery (yellow arrow) was normal. (B) Right coronary artery showed no stenosis.

inotropic therapy, the patient's condition improved. She was discharged with medication adjustment, changing RAASi into an angiotensin receptor-neprilysin inhibitor and adding a sodium-glucose cotransporter-2 inhibitor.

A massive myocardial calcification is a rare sequel of extensive MI,¹⁾ associated with poor prognosis by causing complications such as chronic heart failure and arrhythmia.²⁾ We report a rare case of a long-term survivor of MI with extensive myocardial calcification. The patient described here had not received revascularization but maintained GDMT for the management of post-MI heart failure.

We obtained written informed consent from the patient.

SUPPLEMENTARY MATERIALS

Supplementary Video 1

Transthoracic echocardiography video: parasternal long axis.

[Click here to view](#)

Supplementary Video 2

Transthoracic echocardiography video: apical 4-chamber.

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Supplementary Video 3

Transthoracic echocardiography video: apical 2-chamber.

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