Journal of the Saudi Heart Association

Volume 32 | Issue 4 Article 9

2020

A multiloculated left ventricular thrombus

A Multiloculated Left Ventricular Thrombus

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Abstract

A 50-year-old-man presented with worsening heart failure. He had suffered an anterior wall myocardial infarction nine years prior and had severe left ventricular dysfunction. On transthoracic echocardiography a mass was seen attached on akinetic left ventricular apex with multiple internal hypoechoic loculations, suggestive of a left ventricular thrombus.

Keywords: Myocardial infarction, Left ventricular dysfunction, Thrombus, Left ventricular thrombus

A 50-year-old man with coronary artery disease and severe left ventricular (LV) dysfunction presented with acute decompensated heart failure. The patient had experienced an anterior wall myocardial infarction (MI) nine years prior, and the baseline ejection fraction (EF) was 30%. The transthoracic echocardiogram showed an apical thrombus with well-defined borders, distinct from the underlying endocardium (Fig. 1, Video-1). It had independent mobility and internal hypoechoic areas giving it a loculated appearance. There was thinning and dyskinesia of the underlying myocardial segments. An echocardiogram done one month prior to admission had not shown any LV thrombus and there was no history of thromboembolic events in the intervening period.

Supplementary video related to this article can be found at https://doi.org/10.37616/2212-5043.1228

Heart failure is the most common cause of LV thrombus. Presence of a dyskinetic segment and LVEF <40% are important risk factors [1,2]. Most thrombi resolve by undergoing spontaneous lysis, a process which is facilitated by anticoagulation. This could explain the appearance of the thrombus in our case with a smooth outer contour and multiple internal hypoechoic regions corresponding to regions of lysis. Persistent thrombi that do not dissolve or embolize, may get organized and undergo neovascularization. Anticoagulation should be administered for the resolution of the thrombus and the duration of anticoagulation after resolution of thrombus should be individualized [3]. Although the risk of embolization from thrombi may decrease with organization of the thrombus, the underlying LV dysfunction and wall motion abnormality predispose to recurrent thrombus formation.

Author contribution

Conception and design of Study: Dinkar Bhasin, Gaurav K. Arora. Literature review: Dinkar Bhasin, Gaurav K. Arora, Anunay Gupta, H.S. Isser. Acquisition of data: Dinkar Bhasin, Gaurav K. Arora, Anunay Gupta, H.S. Isser. Research investigation and analysis: Dinkar Bhasin, Gaurav K. Arora. Drafting of manuscript: Dinkar Bhasin, Gaurav K. Arora, Anunay Gupta, H.S. Isser. Supervision of the research: Anunay Gupta, H.S. Isser.

Disclosures

Nil.

Received 21 September 2020; accepted 1 October 2020.
Available online 29 December 2020.

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https://doi.org/10.37616/2212-5043.1228

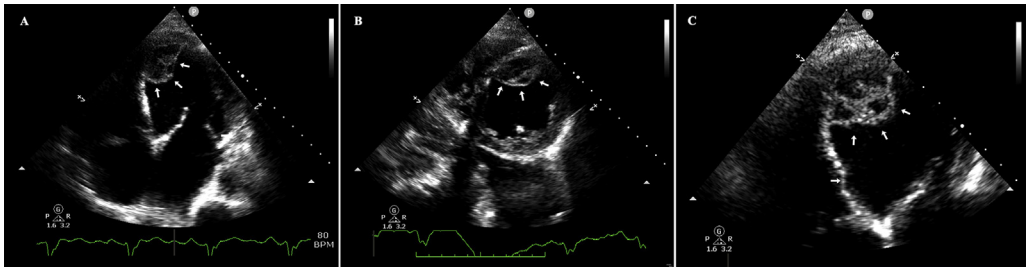

Fig. 1. Transthoracic echocardiography images showing apical thrombus with multiple internal hypoechoic regions. Panel A: Apical four-chamber view; Panel B: parasternal short-axis view; Panel C: Zoomed apical two-chamber view.

Abbreviation list

LV	Left Ventricle
MI	Myocardial Infarction
EF	Ejection Fraction

Funding

Nil.

Conflicts of interest

Nil.

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