

# Left Ventricular Pseudoaneurysm Secondary to Recurrent Mitral Prosthetic Valve Endocarditis

Hironobu Nishiori<sup>1</sup> and Goro Matsumiya<sup>2</sup>

<sup>1</sup>Japanese Red Cross Narita Hospital

<sup>2</sup>Chiba University Hospital Department of Cardiovascular Surgery

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## Abstract

An 86-year-old man who had undergone two mitral valve replacements developed heart failure due to prosthetic valve infection and left ventricular pseudoaneurysm (LVPA). LVPA due to infective endocarditis is rare and caused by the abscess formation in the left ventricular myocardium. Multiple mitral valve replacements may predispose to LVPA forming.

## Left Ventricular Pseudoaneurysm Secondary to Recurrent Mitral Prosthetic Valve Endocarditis

<sup>1</sup>Hironobu Nishiori MD, <sup>1</sup>Goro Matsumiya MD, PhD

1 Division of Cardiovascular Surgery, Chiba university hospital, Chiba, Japan

**Corresponding author :** Hironobu Nishiori

Division of Cardiovascular Surgery, Chiba University Hospital

1-8-1, Inohana, Chuo-Ku, Chiba-City, 286-0041, Chiba, Japan

E-mail: hironobunishiori@gmail.com

Tel: +81-1219-7242; Fax: +81-432-22-7171

## Key clinical message

Left ventricular pseudoaneurysm (LVPA) caused by prosthetic valve endocarditis is a rare condition that results from the abscess formation in the left ventricular myocardium. Multiple mitral valve replacements may predispose to the formation of LVPA.

## Key words

Mitral valve replacement, prosthetic valve endocarditis, infective endocarditis, left ventricular pseudoaneurysm

## Abstract

An 86-year-old man who had undergone two mitral valve replacements developed heart failure due to prosthetic valve infection and left ventricular pseudoaneurysm (LVPA). LVPA due to infective endocarditis is rare and caused by the abscess formation in the left ventricular myocardium. Multiple mitral valve replacements may predispose to LVPA forming.

## CASE

An 86-year-old man with a history of mitral valve replacement (MVR) for infective endocarditis 17 years ago and re-do MVR for prosthetic valve endocarditis four years ago presented with fever and shortness of breath. The blood cultures were positive for *Enterococcus* spp, and antibiotic therapy was initiated. The computed tomography imaging showed the pseudoaneurysm formed at the posterior wall of the left ventricular (Figure 1). Transthoracic echocardiography exhibited the partially detached prosthetic valve from the mitral annulus with severe para-valvular leakage (Figure 2). The patient underwent third-time MVR closing the orifice of LVPA with the Hemashield patch (Figure 3, 4). The 1-year follow-up echocardiography showed no mitral regurgitation or blood flow into the aneurysm.

Left ventricular pseudoaneurysms (LVPA) due to mitral valve infective endocarditis are rare, accounting for less than 1% of all LVPA, and are fatal with a 35-40% risk of rupture [1]. LVPA is formed when an abscess invades the left ventricular myocardium forming an abscess cavity and predisposing to left ventricular wall dissection [2]. In this case, the patient underwent MVR twice, which may have weakened the tissue around the mitral annulus and predisposed to abscess extension into the left ventricular myocardium, leading to the LVPA formation.

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## **CONFLICT OF INTEREST**

The authors have no pertinent conflicts of interest to report for this manuscript

## **ETHICS STATEMENT**

None

## **WRITTEN CONSENT FROM THE PATIENT**

Written informed consent was obtained from the patient to publish this report in accordance with the journal's patient consent policy

## **DETAILED AUTHOR'S CONTRIBUTION**

HN: cared for the patient. HN: got the patient consent form and prepared the clinical picture and computed tomography imaging data, and wrote the report. GM: read and approved the final version of the report.

## **DATA AVAILABILITY STATEMENT**

None

## **REFERENCE**

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