Case Report

# Pseudoaneurysm of the Mitral-Aortic Intervalvular Fibrosa

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Mitral- aortic intervalvular fibrosa pseudoaneurysm a rare complication of aortic valve replacement, that was diagnosed in a 55 years-old 2 years after operation.

## Introduction

Mitral- Aortic intervalvular fibrosa (MAIVF), that is the region of mitral- aortic continuity, contains mostly fibrous and avascular tissue and is therefore the weakest segment of aortic ring which is prone to infection and sensitive to trauma.

The roof of MAIVF in formed of pericardium and its ventricular side is the posterior portion of left ventricular outflow tract. Dehiscence in this region, secondary to infection or surgical trauma, may result in the formation of an abscess or a pouch between, the medial wall of the left atrium and the aorta. An intervalvular pseudoaneurysm ensues when the abscess or pouch communicates with the LVOT.[1]

## Case report

A 55 year-old man was referred for evaluation of aortic bioprosthesis. Two years earlier, he had developed aortic valve endocarditis with acute severe aortic regurgitation necessitating urgent cardiac surgery and replacement of aortic valve. He had been asymptomatic ever since. Transthoracic echocardiography revealed a normally positioned biologic prosthetic aortic valve along with moderate aortic regurgitation. Therefore, transesophageal echocardiography was performed for further evaluation. The prosthetic aortic valve was in a normal position. There was a thin-walled cavity in the region between the anterior mitral leaflet and the aortic root with expansion during systole (Fig. 1A) and collapse during diastole. (Fig. 1B) Color Doppler echocardiography demonstrated that the cavity communicated to the left ventricular outflow tract without any connection to the left atrium or aortic root. Color Doppler echocardiography also revealed a turbulent flow into the cavity in systole and outward flow in diastole.(Fig. 2) These findings were consistent with the diagnosis of pseudoaneurysm of the mitral-aortic intervalvular fibrosa.

## Discussion

Intervalvular pseudoaneurysm ensues when a poach between the medial wall of the left atrium and the aorta communicates with the left ventricular outflow tract.[1, 2] Complications of intervalvular pseudoaneurysms may include rupture of the pseudoaneurysm into the left atrium, aorta or even pericardial sac, with

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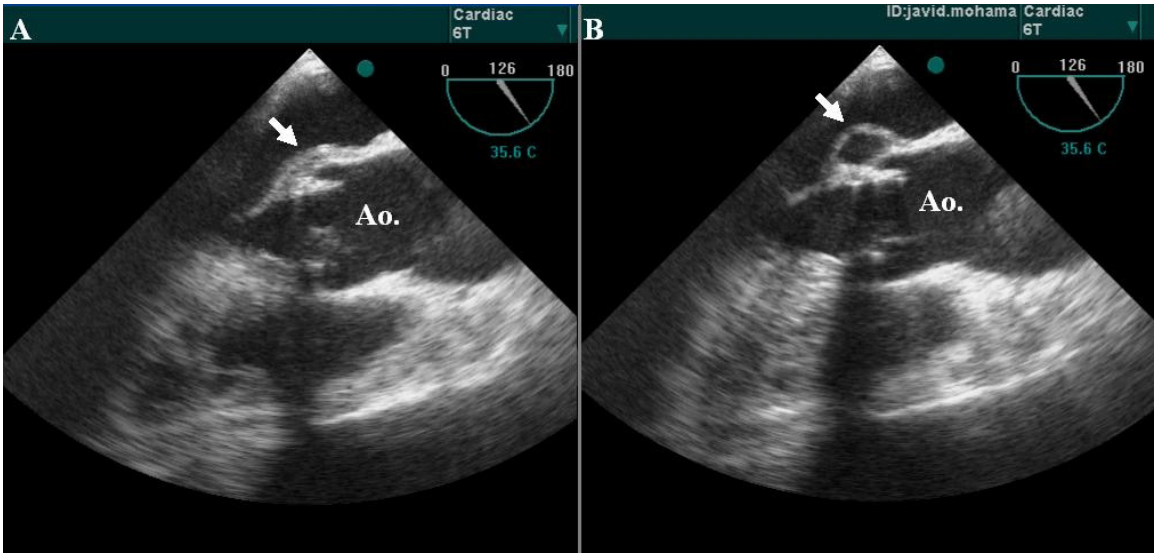


**Figure1.** Illustration of trans-esophageal echocardiography of a patient with biologic aortic valve. There is a thin-walled cavity in the region between the anterior mitral leaflet and the aortic root with expansion during systole [A] and collapse during diastole [B] (white arrow).

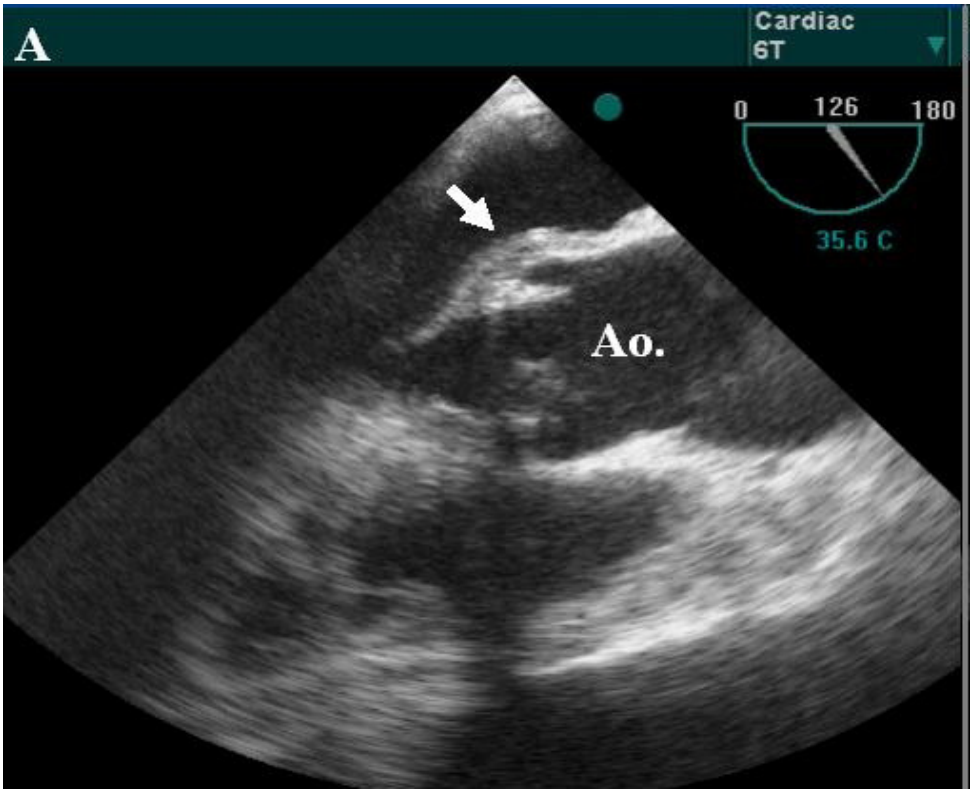


**Figure.2** Illustration of trans-esophageal echocardiography of a patient with biologic aortic valve. Color Doppler echocardiography shows a turbulent flow into the cavity in systole and outward flow in diastole. Note that the cavity is communicated to the left ventricular outflow tract without any communication to the left atrium or aortic root (white arrow).

ensuing cardiac tamponade and death. Accurate detection and delineation of intervalvular pseudoaneurysms and differentiation from ring abscesses is therefore crucial in overall patient management and in surgical guidance because, as a result of their location, the pseudoaneurysms may not be readily identified at operation.

## Acknowledgements

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**Refferences**

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