Introduction

It is uncommon to discover a new left atrial mass postheart surgery. In addition to the usual differentials such as thrombus, vegetation, or tumors such as myxoma, we report a case of inverted left atrial appendage (LAA) that masqueraded as a left atrium (LA) mass.

Case Report

A 39-year-old female patient with severe calcific aortic stenosis was planned for aortic valve replacement. Transesophageal echocardiography (TEE) done intraoperatively showed severe aortic stenosis with a peak gradient of 74 mmHg and moderate aortic regurgitation. During the surgery, a left ventricular vent was placed through a right superior pulmonary vein to prevent distension of the left ventricle due to the moderate aortic regurgitation [Figure 1].

After aortic valve replacement was done and the heart was beating adequately, the left ventricular vent was removed, following which a homogeneous hyperechogenic ovoid mass was seen in the LA on TEE [Figures 2 and 3]. The mass appeared to be attached to the anterolateral wall of the LA above the mitral annulus and prolapsed into the mitral valve. The surgeon was alerted about the suspected mass. The LA was externally inspected, and it was found that there was inversion of LAA. Digital manipulation and eversion of LAA were done by the surgeon after which the mass disappeared on TEE [Figure 4]. Patient was successfully weaned off bypass.

Discussion

When a new LA mass is discovered intraoperatively on TEE, it is usually assumed to be a clot, tumor, or vegetation. Inversion of the LAA after cardiac surgery is a rare finding. It can occur during weaning from cardiopulmonary bypass (CPB) while the heart is still empty. The likely cause is due to the negative pressure created by the left ventricular vent introduced during surgery. It is also possible that the appendage may have de-aired during the surgery.

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Abstract

An inverted left atrial appendage after cardiac surgery is a rare finding and can be misinterpreted as a thrombus, mass, or vegetation. We report a case where intraoperative transesophageal echocardiography assisted in making an accurate diagnosis.

Keywords: De-airing, inverted left atrial appendage, left ventricular vent

Interesting Images
invert during the de-airing maneuvers. On TEE, it can give a “crooked finger” or tongue-like appearance. Apart from causing confusion in the diagnosis, it can cause mitral valve obstruction and impaired ventricular filling and necrosis and rupture of the left atrial wall. Inability to identify the mass as an inverted LAA can result in unnecessary return to CPB, surgical intervention, and additional ischemia time. The key to recognizing an inverted LAA is being aware of its existence, especially when it newly appears postsurgery and knowledge of its position which is located just superior to the mitral valve and inferior to the pulmonary veins. It generally everts spontaneously once the heart is filled. Other methods to correct it are by Valsalva maneuver, digital manipulation, or pulling by forceps. Rarely, LA appendage ligation might be required.

This case highlights the invaluable use of intraoperative TEE which enabled an inverted LAA to be identified immediate postsurgery which otherwise would have gone undetected causing confusion in diagnosis postoperatively and unnecessary resurgery.

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Conflicts of interest
There are no conflicts of interest.

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