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A complication prevented by the primary aetiology: A case report of LA thrombus in an RVD patient with mitral stenosis

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Abstract

The aim of this paper was to present a case report in which prothombic or hypercoagulable states had caused a large mobilizing thrombus to developed in the Left Atrium (LA). This is perhaps due to delay in primary management. If it is not due to narrowing of the mitral valve as a result from mitral stenosis, the LA thrombus could have cause a catastrophic complications.

Introduction

Rheumatic Heart Disease (RHD) is the most common cause of Mitral Stenosis (MS) and remains a cardiovascular health problem in developing countries [1,2]. MS with or without Atrial Fibrillation (AF) increases the risk of Left Atrial (LA) thrombosis [3,4] and HIV infection adds on to the prothrombotic state [5]. We describe an interesting clinical case in a patient with multiple thrombotic risks.

Case report

A 43-year-old gentleman with MS who was planned for Mitral Valve (MV) replacement defaulted follow-up in 2017 after being pre-operatively diagnosed with retroviral disease. He presented to the Emergency Department a year later in decompensated heart failure with episodic haemoptysis and constitutional symptoms for one month. Clinically, he was alert, tachypnoeic, hypotensive at 94/54 mmHg and was in AF at a rate of 102 bpm.

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Cardiovascular examination revealed a diastolic thrill in the left lateral position, a loud S1 and a low-pitched mitral rumble. ECG confirmed AF and an erect chest X-ray revealed a straight left heart border with left pleural effusion (**Figure 1**). Transthoracic echocardiography demonstrated severe MS (diastolic doming of anterior MV leaflet; thickened, calcified and fused chordae; with MVA planimetry of 0.64cm^2) with a left ventricular ejection fraction of 32% and a large LA thrombus measuring 2.3cm x 2.5cm (**Figure 2**). He was initiated on HAART therapy and is currently planned for surgery following adequate viral load suppression.

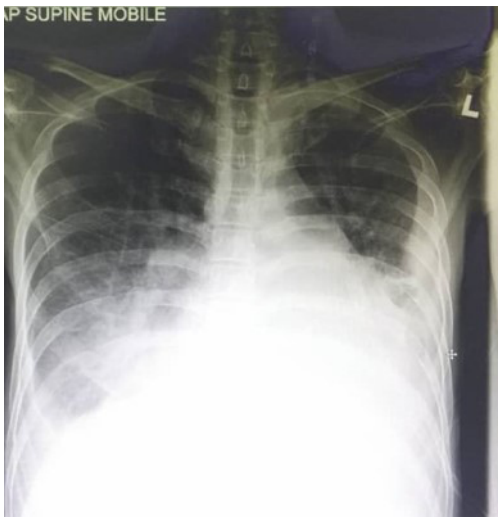

Figure 1: LA dilatation with left pleural effusion

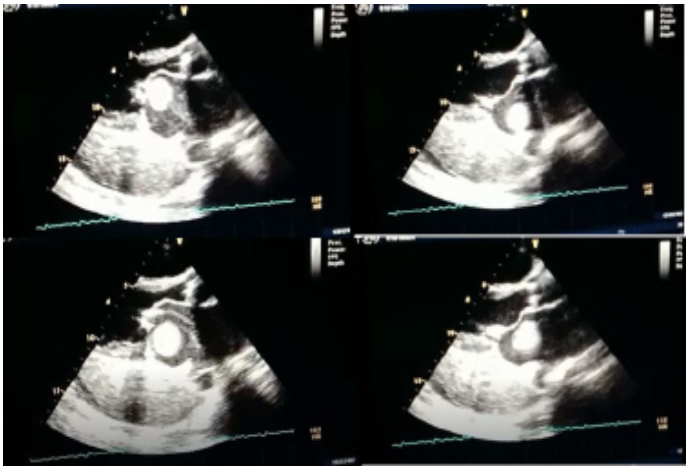

Figure 2: Echocardiogram showing a large LA thrombus (2.3 x 2.5cm) with mitral stenosis valve. AF is seen on ECG monitor.

Discussion & conclusion

Intracardiac thrombosis, a known complication of mitral stenosis, has been shown to independently increase the risk of ischemic cerebral stroke by two-fold [6]. LA thrombus reportedly occurs in about a third of patients with MS and concurrent AF [4]. Even in the absence of AF, thrombosis may still form at a lower incidence rate of 0.01% due to LA stasis [3]. Additionally, HIV-infected patients are at a 2-10 fold increased risk of thrombosis compared to the general population [5].

This patient, having had three independent thrombotic risks (MS, AF and HIV infection) formed a large LA thrombus and heart failure within a year. However, his severe mitral stenosis prevented his LA thrombus from embolising possibly saving him from a fatal cardio-embolic stroke. We therefore stress the importance of close surveillance, adequate multi-disciplinary medical therapy and early surgical intervention in RHD patients with prothrombotic predisposition.

Acknowledgment

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Ethics

Informed consent has been obtained from the case study and anonymity is preserved in this case report.

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