

# Ghost Face on a Left Atrial Thrombus in a Young Lady of Bangladesh !!!

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## Abstract:

**Key words:**  
Rheumatic heart disease, LA thrombus.

A 36 years old married female with children from a district of Bangladesh had been suffering from mitral stenosis with atrial fibrillation (AF) with left atrial(LA) thrombus & active pulmonary tuberculosis under anti-TB drugs. She presented with shortness of breath (SOB), blood mixed sputum & right lower limb pain for 14 days which was later diagnosed as thromboembolism with acute limb ischemia. LA clot was removed by open heart surgery. Three masses of clots were removed, one ball thrombus, another irregular mass taking the shape of LA appendage and the other is a mixture of old and fresh thrombus. Patient underwent mitral valve replacement (MVR). One side of the irregular thrombus showed the impression of a human face (? Ghost). Histopathology confirmed them as thrombi. Patient was discharged home on the 8th post operative day.

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## Introduction:

In a review article of Carapetis, J.R. in 2008, the prevalence of rheumatic heart disease is 0.68 to 1.3 per 1000 in the school going children of South Central Asia.<sup>1</sup> About 25 percent of all patients with rheumatic heart disease have isolated Mitral Stenosis, and about 40 percent have combined MS and mitral regurgitation. The interval between the initial episode of rheumatic fever and clinical evidence of mitral valve obstruction is variable, ranging from a few years to more than 20 years.<sup>2</sup> Patients with mitral stenosis and atrial fibrillation have a 4 to 6 percent incidence of embolism per year.<sup>3</sup> Most cases of left atrial thrombus ball in the literature have been reported in association with atrial fibrillation and mitral stenosis. Distal embolization subsequent to fragmentation is believed to be the cause of cerebrovascular accident or potential loss of a limb.<sup>4</sup> *A ghost (or apparition) is a human (sometimes animal) figure, witnessed by someone, which cannot be physically present.*<sup>5</sup> Although few cases of ball thrombus have been reported in literatures but a human faced (Ghost) irregular thrombus with a ball thrombus in the left atrium had never been reported before.

## Case Report:

A 36 year old married female with three children from Barguna district was admitted in PCCU through ER of NICVD, Dhaka on 25/01/2012 with

the complaints of: Shortness of breath (SOB) for 6 years, occasional blood mixed sputum-for the last 03 months, right lower limb pain-14 days. She was reasonably well 6 years back. Then shortness of breath appeared on mild to moderate exertion. For the last three months SOB worsened & appeared even at rest. She also complaints of productive cough mixed with blood Fourteen days ago sudden onset of her right lower limb pain. Above complaints and blood mixed sputum compelled her to be admitted at NICVD. She had also been suffering from pulmonary tuberculosis (sputum +ve) and on anti TB medication (4 drugs) for the last 2 months. No history of Rheumatic Fever, or stroke but the history suggests thromboembolism in her right lower limb. She is non diabetic, non hypertensive. She was taking Acetyl salicylic acid, Phenoxy methyl penicillin, Warfarin, diuretics, combination of four anti-TB drugs, Pyridoxin. After admission under cardiology unit she was referred for her right lower limb pain for vascular opinion. There was diminished sensory and motor function in distal third of leg and foot with diminished pulse from femoral to downwards on the right side. They planned for embolectomy under LA. Duplex USG of right lower limb was advised. Fogarty embolectomy was considered but deferred on the ground of cardiac risk due to Mitral stenosis with LA thrombus. She was also referred for cardiac surgery opinion.

Initial comment was to continue warfarin and anti TB drugs.Embolectomy after proper counselling .To send the patient for open heart surgery after the sputum becomes negative for TB bacilli.Subsequently reviewed by respective consultant and advised for removal of thrombus with open mitral commissurotomy (OMC) or mitral valve replacement(MVR). Sputum was also sent for AFB which was found negative.

On examination, patient raised JVP with hepatomegaly. Pulse-110/min irregularly irregular BP-100/70 mm of Hg, Heart sound- loud 1<sup>st</sup> heart sound & loud pulmonary component of 2<sup>nd</sup> heart sound, no murmur . Clinical diagnosis was Mitral stenosis with pulmonary hypertension with atrial fibrillation with Congestive cardiac failure with acute right lower limb ischemia due to thromboembolism with pulmonary tuberculosis(On anti TB treatment)

X-ray and blood: CXR-consistent with Mitral valvular disease. Preoperative echocardiography: Left Atrium-53mm, Ejection Fraction -55%, Mitral valve area-0.8cm<sup>2</sup> Mitral valve Peak pressure gradient - 20mm Hg, RA&RV dilated, Mitral valve: AML & PML are thickened with Gr-II subvalvular changes . Commissures are fused not calcified. Other valves are normal. Pericardium-mild effusion. Echogenic mass measuring about 5..5 cm x 4.5cm. Attached from the (?) auricular appendage/ (?) posterior left arterial wall - likely left(?) atrial myxoma.

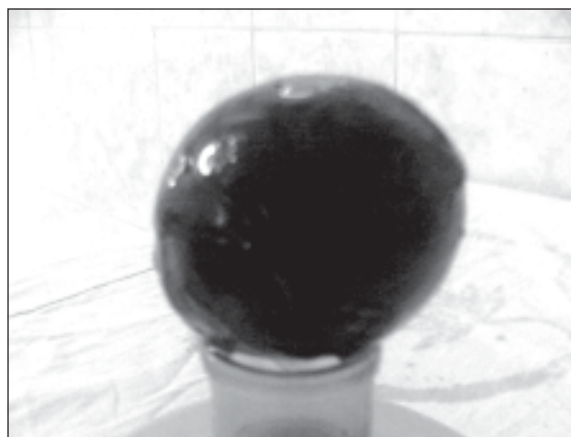
Patient was operated on 18.02.2012 under general anaesthesia through mid sternotomy approach CPB was established with aortic and bicaval cannulation. Antegrade intermittent cold blood cardioplegic arrest and through standard left atriotomy incision, masses of left atrial(LA) clots were removed with the aid of a spoon and suction. There were three masses of clots-one ball like ,one irregular & other recent clot. After profuse normal saline wash, valve morphology was evaluated and found unsuitable for open mitral commissurotomy. So Mitral valve replacement was done with 25 mm On-X bileaflet mechanical valve. Plication of LA appendage was done from inside .Extubated on the same day. ICU stay was 03 days and discharged on the 8<sup>th</sup> Post operative day.

Histopathology: Revealed organized clot in the two specimens of tissues.

Advice during discharge: Advised to follow precautions for valve replacement and to attend vascular surgery department for limb ischemia and National Institute of Chest Diseases and Hospital(NIDCH) for follow up for TB treatment.



**Fig 1:** Human face (Ghost face) on an irregular thrombus.



**Fig 2:** Ball thrombus in the same patient.

### Discussion:

The patient in this case report presented with shortness of breath for several years with aggravation of the symptoms for the last three months, occasional blood mixed sputum for the same duration & right lower limb pain for 14 days which was later diagnosed as thromboembolism with acute lower limb ischemia. Left atrial (LA) clot was removed by open heart surgery. Three masses of clots were removed, one ball thrombus, another irregular mass taking the shape of LA

appendage and the other is a mixture of old and fresh thrombi. Patient underwent MVR. One side of the irregular thrombus showed the impression of a human face (?Ghost) on the photograph. It was discovered incidentally after the photographs were taken. This lady was from a remote village far away of this tertiary hospital. She was treated by local doctors till she was diagnosed by a cardiologist. She was on aspirin and other medications. Subsequently warfarin was added. Infact she was a neglected case. Urgent operation is usually performed for this sort of patient. Because the patient was from low economic condition, although hospital provided a free of cost oxygenator circuit & some medicine yet the patient had to spend money to complete the operation. So she could not be operated on an urgent basis. She was lucky enough for that no further thromboembolism occurred. The experience of Maze procedure is nil in this centre which could give a better option with surgical management for this patient with chronic AF. She will be on oral anti coagulation and follow up. The fact is that as she is from a lower socioeconomic class there is every possibility of non compliance of warfarin and drop out from regular follow up. In that case it will be very difficult to say what will happen to her in future.

### **Acknowledgement:**

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