PING PONG BALL IN A HEFTY HEART – A CASE REPORT

Rabindranath Das*, Naryayan Goutam**

**Department of Medicine, Manipal Teaching Hospital & **Department of Cardiology ,Padma Nursing Home Pokhara , Nepal*

Abstract: *We describe here a very unsual case of a large free floating left atrial thrombus due to critical mitral stenosis detected by incidental echocardiography, in whom symptoms and complications of thrombus were absent. The patient's only symptom was mild dysponea attributed to smoking. She had no syncope or arrhythmia induced embolic event. Owing to nan-availability of cardiothoracic facility, she was given anticoagulant therapy which resulted in intracerbral haemorrahge and death.*

Key words: *Ball thrombus mitral valve disease, asymptomiatic, anticoagulant, intracerebral bleed.*

INTRODUCTION

Mural thrombus in left atrium or its appendage is a common finding in mitral valve disease with arrhythmia but potentially fatal free foating ball valve thrombus is rare. The thrombus can produce abruptly obstructed mitral valve or catastrophic emblic event. Here we report an unusual case of large left atrial floating thrombus in a long standing case of critical mitral stenosis without arrhythmia or any complication but she died shortly after prophylactic anticoagulant therapy out of intracerebral bleed.

CASE HISTORY

This 53-year old smoker, presented with breathlessness for last one year. She had no syncope or palpitation. There was no history of childhood joint pain or sore throat. Routine physical examination revealed apical middiastolic rumble with presystolic accentuation and pansystolic murmur. She had early diastolic murmur at Erb's area also. Her temperature was 98.4oF, pressure 110/60 and pulse 88/min, regular, All other physical examination was unremarkable. Other laboratory investigations including liver, thyroid function haemorgram, coagulation profile and biochemistry were unremarkable. Electrocardiogram showed right axis deviation, clockwise rotation and right ventricular hypetrophy. Chest skiagram showed cardiomegaly and mitralization of heart. Transthoracic colour flow doppler echocardiography revealed: LA 60 .4 mm, Ao27.7mm, LVID54 mm (diastole) and 37.5 (systole). EF 57%, mitral vlave area 0.69cm^2 and no evidence of valvular vegetation. There was an echogenic large left atrial snow ball like mobile mass resembling a trhombus which rolled and tumbled around the left atrium and bounced off the atrial walls suggesting a free floating thrombus in a case of mild mitral regurgitation, moderate aortic regurgitation and severe mitral stenosis. As there was no cardiothoracic facility available she was put on heparin followed by warfarin with a international normalized ratio of 3.5 On the 6th day of hospital stay, the patient suddenly went into deep coma had convulsion with decorticate posturing. Computerized tomographic scan revealed massive heamorrage in both basal ganglia with ventricular extension the patient died on 10th day of hospitalization.

DISCUSSION

Left-atrial thrombus is an infrequent complication of mitral valve disease. Ball thrombus originates as mural thrombus on interatrial septum. Thrombus enlarges slowly to form a projecting mass being connected with a pedicle from atrial wall. As the bulbous end of thrombus enlarges due to fibrin and platelet deposition, the pedical lengthens and thins out and eventually separates or fragments from the main ball thrombus. Thrombus spins freely in dilated left atrium and acquires characteristic smooth polished appearance[1]. Transient embolism or stroke occurs during thrombus development. Our patient did not experience any such event before hospital admission. In hospital she was diagnosed clinically to have obstructive airway with valvular heart disease, confimed by transthoriacic colour flow doppler study. Her dyspnoea and preferred supine posture were attributed to emphysema and the panystolic murmur was ascribed to tricuspid regurgitation owing to pulmonary hypertension and right ventricular hypertrophy. Due to non-availability of surgical option, she was put on prophylactic warfarin after initial heparin therapy with normal target range of activated partial thromboplastin time and international normalized ration [3 to 3.5]; on the 6th post hospitalization day she suddenly developed haemorrhagic carebrovascular accident, confirmed by brain scan and died on 10th day. Prior to advent of surgical treatment of mitral stenosis nearly 20% of some time during the course of the disease and about 10-15 % of this group died from its complications[2]. Before the era of anticoagulant therapy and surgical treatment, approximately one fourth of all fatalities in patient with mitral vlave disease were secondary to thromoembolism[3]. Embolzation correlates inversely with cardiac putput and directly with patient's age and size of left atrium, 80% of patients with mitral stenosis in whom systemic emboli develop are in atrial fibrillation and this risk of recurrent events exceeds 10% per year. If embolization occurs in patients with sinus rhythm, the possibility of transient atrial fibrillation and underlying infective endocarditis should be considered[4]. Rarely abrupt left atrial outlow tract obstruction from a large pedunculated ball vlave thrombus in variable body position may cause syncope or sudden death, requiring emergency surgical intervention which gives a survival benefit of more than 90%[5]. Free floating ball thrombus is a rare and dramatic finding seen on echocardiography in patients with mitral valve disease and may even persist after valve replacement and adequate anticoagulation[6]. Here the clinical diagnosis was difficult as there were few symptoms and no complications of rheumatic mitral valve disease. Seconly, obstructive airway disease which misled the clinician until she had undergone the colour flow Doppler echocardiogram cliniching diagnosis of multiple valvualr lesions and large free floating ball valve thrombus. Clinically she had presystolic, middiastolic, early diastolic and pansystolic murmur. She had neither varied symptoms like dyspnoea[7] nor any change of murmur in different body position. It was unfortunate that poor socioeconomic condition was also responsible for her premature death.

ACKNOWLEDGEMENT

We are thankful to Prof. V.M. alurkar, professor of cardiology, Manipal teaching hospital, Pokhara, Nepal in preparing this manuscript and also greatful to Dr. Naresh Goyal DM(Cardiology), associated professor, cardiology department, G.B. Pant hospital, New Delhi for his valuable suggestion in the final proof reading of this article.

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Correspondence: **Dr. Rabindranath Das**, *Department of Medicine, Manipal Teaching Hospital, Pokhara, Nepal* ***e-mail:*** *das_rabindranath@ hotmail.com*