CASE REPORT

A Case of Left Ventricular Myxoma

Ejaz Hossain[1], Rezwana Siddique[2], Obaidul Haque[3]

Introduction:

Primary tumors of heart are very rare in all age groups. There are two types of Primary cardiac tumors: Approximately three-quarters are histologically benign, which are: myxoma (50%), fibroma, papillary, fibroelastoma, rhabdomyoma, lipoma and Malignant tumors, almost all of which are sarcomas (angiosarcoma, rhabdomyosarcoma, fibromyosarcoma), account for 25% of primary cardiac tumors[1]. Metastatic and secondary tumour of heart and pericardium (20% to 40% times more often than primary cardiac tumours include breast carcinoma, lung carcinoma, melanoma, lymphoma)[1]. Myxoma is the most common primary tumor of the heart in adults which is located in left atrium (83%), right atrium (12-7%), ventricles (1.7%, left ventricle: 0.6%). The precise etiology has proved difficult to delineate, and appears to be related to autosomal dominant gene mutations (10% case)[2]. All age groups, but most frequent among third and sixth decade of life, but incidence common in females. Cardiac myxomas maybe sporadic, familial, or complex cardiac myxoma. Myxoma is mostly single in number, appears grossly as gelatinous mass, can be pedunculated, polypoid or sessile, attached by pedicle to inter ventricular septum. The precise rate of growth is unknown, although it is believed to be reasonably fast. Whilst essentially non-malignant, there are reported cases of growth at extra-cardiac sites. Although asymptomatic patient with myxoma have been reported but clinically manifests by one or more effects of triad: haemodynamic derangements, embolic phenomenon and constitutional features. Among them embolism is a major feature in cardiac myxoma which is derived from tumor fragments, detachment of tumor as a whole overlying thrombi. Left ventricular myxomas have a higher rate of embolism and tend to embolise to the brain more frequently than to other sites. Signs and symptoms may be confused with rheumatic disease of the tricuspid, mitral, or aortic valves, sub-acute bacterial endocarditis, constrictive pericarditis, superior venacaval syndrome, or carcinoid tumour. When symptoms vary or murmurs with change with postural change or progression of dyspnoea is unusually rapid, the possible diagnosis is cardiac myxoma. Generalized systemic reactions are often times related to intracardiac myxomas. Fever, anaemia and weight loss may be associated with or occur independently of leukocytosis, elevated sedimentation rate, and decreased platelets. Serum albumin-globulin ratio is often reversed, and hyper-globuniaemia with elevated gamma globulin sometimes occurs[3]. This may be an auto-immune response to

1. Assistant Professor, Department of Cardiology, Holy Family Red Crescent Medical College, Dhaka.
2. Registrar, Department of Cardiology, Holy Family Red Crescent Medical College, Dhaka.
3. Professor and Head, Department of Cardiology, Holy Family Red Crescent Medical College, Dhaka.

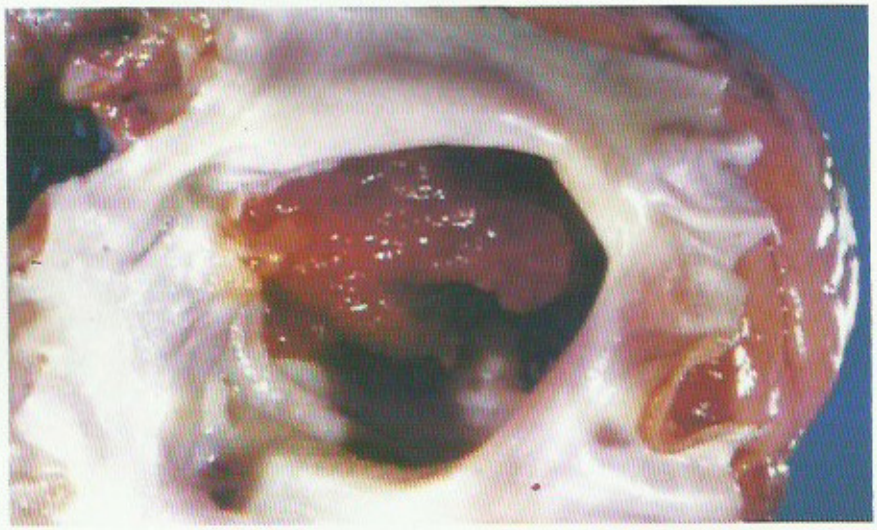

Figure-1: Myxoma - A gelatinous tumor attached by a narrow pedicle to the atrial septum.

tumour fragments. Polycythaemia has also been reported, especially with right atrial myxoma. For diagnosis we usually do Echocardiography, Computed tomography (CT), Cardiac magnetic resonance (CMR), and Positron emission tomography (PET). Once diagnosis is confirmed treatment is by surgical resection. Such operations are considered urgent procedures as about 8-10 % die awaiting operation, especially if patient has history of: Syncope (direct extension of tumor into conduction system) or Embolism (with lethal sequel). Long-term outcomes following complete resection of a cardiac myxoma are excellent. A very few of cases might recur.

Case Report:

A 75 year hypertensive woman admitted in HRCRMCH with history of irrelevant talking for 7 days and high grade intermittent fever for 5 days. She gave a history of left sided chest pain for the first time 20 years back which was localized, squeezing in nature, over the 4th intercostals space, did not to radiate to anywhere. So, she consulted with a doctor and according to patient's attendant, her Echo showed left Ventricular mass. As it is very rare disease, advised to have surgery but she refused to do so. She started to receive her treatment with homeopathies and continued for one year. In the mean time, she was diagnosed as a case of hypertension and took medicine for it. Since then, she has not mentioned any complains regarding cardiac problem till now. She did not mention any familial history of cardiovascular and neurological diseases. Finding on physical examination was pulse: 64 beats/ min, BP: 130/80 mm of Hg. Remainder of the physical examination was unremarkable. She was disoriented with time and place at that time but her motor and sensory function was normal. On examination 1st and 2nd heart sound was soft & there is systolic murmur.

Laboratory data included Hb% 11.6 gm/dl, WBC 15,300/ cu.mm, PT: 12.3 sec, APTT: 32.5 sec and normal urine analysis, electrolyte and lipid profile. Liver and kidney function tests were normal.. On fundoscopic examination was normal. Her ECG showed brady-arrhythmia with left ventricular hypertrophy with poor progression of R- wave in V1-V4 and Echo cardiography showed old

MI / Infarction (anteroseptal and apical), mild left ventricular systolic dysfunction (EF= 50%), left ventricular myxoma (2.5cm×2cm), moderate aortic stenosis, Grade-II mitral regurgitation, Grade-I left ventricular diastolic dysfunction.

CT scan of brain showed cystic SOL (Space occupying lesion) in left Para saggital fronto-parietal region and MRI of brain & contrast showed Lobulated mass lesion (2.6 cm× 1.5 cm) in left basal ganglion region that suggest the possibilities of primary neoplasm (Glioma), metastatic lesion, small chronic pontine infarct.

The case was managed with differential diagnosis of left ventricular myxoma, primary neoplasm (Glioma), small chronic pontine infarct, hypertension, old anteroseptal and apical MI.

She was advised to take the medicine: Amlodipin, Clopidogrel and Aspirin, Nitrate, Phenytoin, .Atorvastatin, Vinpocetine, .Quetiapine. Patient was heparinized with low molecular weight heparin. But we stopped, as she developed hematoma in her right elbow which was drained by surgeon in this hospital. She also advised for Stereotactic Brain Biopsy and Cardiac Catheterization and Coronary Angiography for final diagnosis and possible surgical removal of left ventricular mass. But, the patient and her attendants refused to do so and confirmatory diagnosis was not possible.

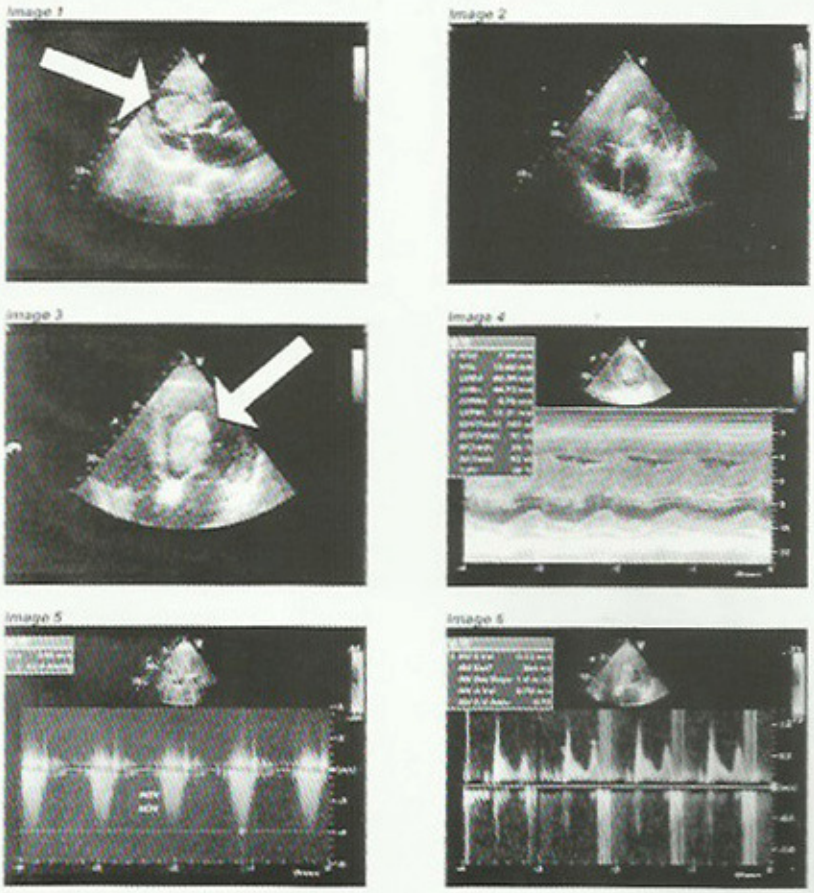

Figure-2: Echocardiography shows left ventricular myxoma.

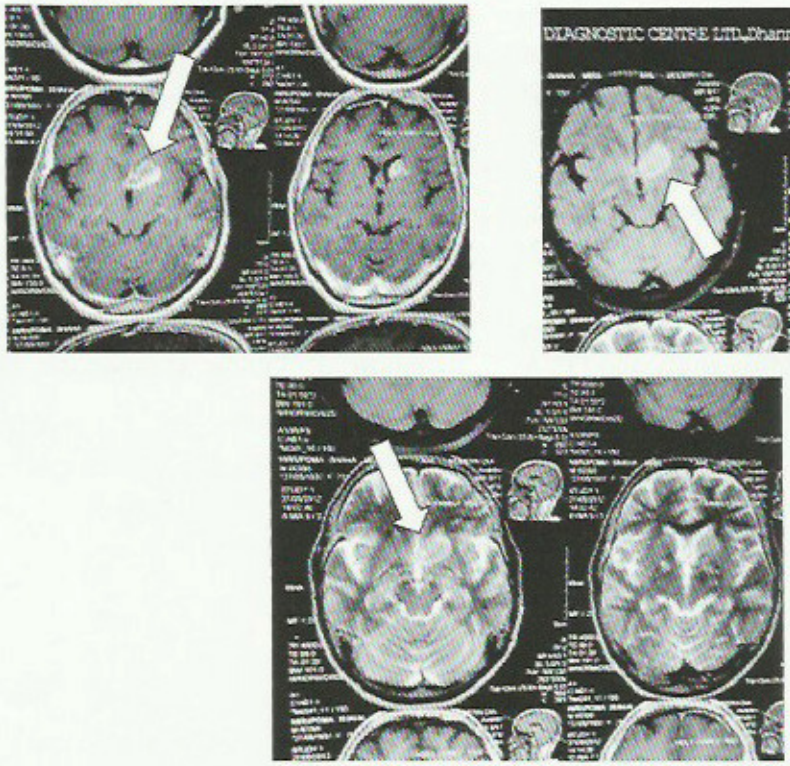

Figure-3: MRI shows lobulated mass lesion in left basal ganglion region.

Discussion:

The case of elder patient in whom echocardiography was performed because of episode of fever with irrelevant talk and discovered the presence of mass in left ventricle. This case has a great interest because the ventricular myxoma is rare disease even in the absence of significant sign and symptom but may cause embolic complication which represents the first sign of neoplastic pathology. Ventricular myxoma is still rare disease and often not found until the patient present with a history of syncopal episode or systemic embolization[5]. Left ventricular myxoma are usually benign and curable. However, unreliable excision of myxoma due to poor visualization of the left ventricular cavity can result in recurrence, most appropriate surgical approach should be applied to excise the myxoma completely. Only two patients with left ventricular myxoma have so far been operated. The first patient was a 32 year old woman who had recovered after surgery in 1959 and second patient who was a 14 year old girl with a systolic murmur in 1963. Two more cases of left ventricular myxoma have been reported later. One was a ten year old girl who died from embolism to both renal arteries and other was a forty-five year old woman who died from a coronary artery thrombosis with a left ventricular myxoma[6].

Long-term outcomes following complete resection of a cardiac myxoma are excellent. 1-3% of cases might recur, and in these instances it can take up to 14 years for recurrence to occur.

References:

1. Sabatine M, Schoen F. Primary tumors of the heart In: Braunwald's Heart Disease, 7th edition, DP Zipes (Editor). Philadelphia, Saunders, 2005. pp. 741-755.

2. Farah HH, Jacob M, Aragam J: Images in cardiology: A case of cardiac angiosarcoma presenting as pericardial tamponade. Heart 2001; 86:665.
3. Grebenc ML, Rosado-de-Christenson ML, Green CE, et al: Cardiac myxomae: Imaging features in 83 patients. Radiographics 22:673, 2002.
4. Acebo E, Val-Bernal JF, Gomez-Roman JJ, et al: Clinicopathologic study and DNA analysis of 37 cardiac myxomas: A 28-year experience. Chest 123:1379, 2003.
5. Sabolek M, Bachus-Banaschak K, Bachus R, et al: Multiple cerebral aneurysms as delayed complication of left cardiac myxomae: A case report and review. Acta Neurol Scand 111:345, 2005.
6. Thomas GI, Edmark KW, Jones TW, Eyer KM. Myxomae of the left ventricle. A case report. J. Thorac Cardiovase. Surg 1963; 46, 220.