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LEFT ATRIAL MYXOMA: CASE REPORT AND LITERATURE REVIEW

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SUMMARY

Myxomas are the most common cardiac neoplasm accounting for 50% of all tumours. Usually symptomatic at diagnosis, the advent of routine echocardiogram in clinical practice has enabled earlier diagnosis before onset of symptoms. There however have been few reports in black Africans, and so we are reporting a male patient who presented with heart failure secondary to a large left atrial myxoma mimicking mitral stenosis from diastolic flow obstruction across the valve. He underwent successful resection and to the best of our knowledge is the first reported resected surgical case in Nigeria.

INTRODUCTION

Primary Cardiac tumours are relatively rare and myxoma the most common variety is found predominantly in the left atrium. They often become symptomatic with increasing size, although smaller mobile tumours can also cause embolic symptoms especially when located in the left heart. They are easily diagnosed non-invasively by echocardiogram and surgical resection provides definitive treatment with excellent long term results.

CASE REPORT

A 50 year old black male was referred to Lagos State University Teaching Hospital (LASUTH) with two years history of shortness of breath, easy fatigability with minimal exertion and chest pain. He was chronically ill looking and had a diastolic murmur maximal at the heart apex. Transthoracic echocardiogram (TTE) revealed a left atrial (LA) mass attached to the atrial septum obstructing flow across the mitral valve during diastole, moderate pulmonary hypertension and normal left ventricular systolic function. Patient underwent surgery with cardiopulmonary bypass under moderate systemic hypothermia, with a tumour measuring 9 x 6 x 5 cm (Fig 1) resected via a transeptal approach, following which the septum was reconstructed with a Dacron patch. Post-operative course was uneventful and patient discharged home one week later. Pathology report confirmed atrial myxoma. Pre-operatively patient was in NYHA Class 3 and post-operatively has remained in NYHA Class 1 for five years.

Fig 1
Excised specimen



DISCUSSION

Metastases most commonly from the lung, breast, melanoma, lymphomas and leukemias are responsible for the majority of cardiac tumours (1). Primary tumours are relatively rare and most are benign. Myxomas are the most common accounting for about 50% of all primary tumours and 75% of all benign tumours. Seventy five percent are found in the left atrium (LA) and most present between the third and sixth decade of life, with 75% of patients being female (2-40). Similar to ours, all patients in reported surgical series (5-7) were symptomatic and presented with one or more triad of constitutional, embolic or obstructive manifestations. In reviewing some of the largest surgical series, Lukacs *et al* (5), over a 20

year period operated on 50 myxomas, with 42 (84%) in the left atrium (LA), and operative mortality of 10% primarily from low cardiac output syndrome. Hanson *et al* (6) with a 24 year review of 33 patients with atrial myxomas reported 3% mortality from tumour emboli to the coronary circulation. Similarly Cleveland *et al* (7) 15 years review of 20 patients with cardiac tumours reported 10% mortality. There was a preponderance of females in the three series but there was no racial breakdown. Myxomas are easily diagnosed by echocardiogram, with trans-esophageal echocardiogram (TEE) nearly 100% sensitive. Without echocardiogram they can be misdiagnosed as mitral valve disease, dilated cardio-myopathy, pulmonary emboli, transient ischaemic attack or cerebro-vascular accident etc (8). This is particularly so in Africa where there is high incidence of rheumatic heart disease. This was the scenario with our patient and that of another report from Ghana by Amoah *et al* (9), of a black male patient who had been symptomatic for three years and in NYHA 4 at the time of referral to a tertiary centre where the correct diagnosis was made by echocardiogram, and surgery subsequently performed. In the developed nations the wide spread use of echocardiography for assessing ventricular function has increased the number of patients with asymptomatic diagnosis of intra-cardiac tumours, thereby allowing earlier treatment before the onset of severe symptoms. In contrast in Africa especially sub-Saharan where healthcare is not as technologically advanced, most cases are unlikely to be diagnosed before the onset of severe symptoms. Increasing awareness through physician education to maintain a high index of suspicion might allow earlier referral to tertiary centres with the capacity to make the correct diagnosis by echocardiography.

The first successful surgical resection with cardiopulmonary bypass of an atrial myxoma was performed by Crawford in 1954. Since then surgical resection has been the standard treatment and usually performed urgently with left sided tumours because of high risk of systemic embolism. Unfortunately in most African countries even when the diagnosis has been correctly made, effective treatment remains elusive for most patients. This is because cardiac surgery is still in its infancy in most of sub-Saharan Africa, with only a small number of functional heart surgery programmes. However with the current efforts of various Governments partnering with some non-governmental organisations with the

technical expertise, it is hoped that in the near future, heart surgery will become routine and more widely available.

In conclusion there is need to encourage African Governments to develop at a minimum one cardiac surgery unit so that effective surgical treatment will be available locally for patients with cardiovascular diseases presently condemned to premature death in most instances.

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REFERENCES

1. MacGee, W. Metastatic and Invasive tumours involving the heart in a geriatric population: A necropsy study. *Virchows Arch-A pathol Anat Histopathol.* 1991; **419**: 183-189.
2. Bulkley, B. H. and Hutchins, G. M. Atrial Myxomas: A fifty year review. *Am. Heart. J.* 1979; **97**: 639-643.
3. Livi, U., Bortolotti, U., Milano, A., *et al.* Cardiac Myxomas: Results of 14 years experience. *Thorac. Cardiovasc. Surg.* 1984; **32**: 143-147.
4. St John Sutton, M. G., Mercier, L. A., Guiliani, E. R., *et al.* Atrial Myxomas: A review of clinical experience in 40 patients. *Mayo. Clin. Proc.* 1980; **55**: 371-376.
5. Lukacs, L., Lengyel, M., Szedo, F., *et al.* Surgical treatment of Cardiac myxomas: 20 year follow up. *Cardiovasc. Surg.* 1997; **5**: 225-228.
6. Hanson, E. C., Gill, C. C., Razavi, M. and Loop, F. D. The surgical treatment of Atrial Myxomas. Clinical experience and late results in 33 patients. *J. Thorac. Cardiovasc. Surg.* 1985; **89**: 298-303.
7. Cleveland, Dc., Westaby, S. and Karp, R. B. Treatment of Intra atrial Cardiac Tumours: *JAMA.* 1983; **249**: 2799-2802.
8. Percell, R. L., Henning, R. J. and Patel, M. S. Atrial Myxoma: Case Report and a Review of the Literature. *Heart Disease.* 2003; **5**: 224-230.
9. Amoah, A. G., Frimpong-Boateng, K., Kallen, C. and Barwasser, H. M. Atrial Myxoma: A case report and review of the literature. *WAJM.* 1998; **17**: 50 -54.