SURGICAL TREATMENT OF ATRIAL MYXOMA, CLINICAL EXPERIENCE AT NATIONAL INSTITUTE OF CARDIOVASCULAR DISEASE

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SUMMARY

Between 1985 to 1998, fifty-two patient (34 female and 18 male) 21 to 53 years of age with a mean age of 34 years underwent surgical excision of atrial myxoma at the National Institute of Cardiovascular diseases, Karachi. Forty-nine (94%) presented with dyspnea while 3 (6.0%) had congestive cardiac failure. Forty-eight patient had left atrial myxoma, 3 had biatrial myxoma and one female had sessile right atrial myxoma. All the left atrial myxomas were pedunculated with varying width of stalk. Myxomas were surgically excised and the stalk was cauterized. Two patients (3.8%) died perioperatively. All other patients had good results. It is concluded that surgical excision of atrial myxoma carries how morbidity and mortality. It should be promptly treated once the diagnosis is made.

INTRODUCTION

For more than 400 years tumors of the heart have been recognized by physicians[1]. In 1945, King[2] published the first clinical description on atrial myxoma. In 1952 Goldberg and associates[3] for the first time made the diagnosis of atrial myxoma in living patient. Because of their rarity and protean clinical manifestations, diagnosis is difficult clinically. During the past decade multiple centers have shown excellent results of surgical therapy with decreasing mortality. In this study we review the surgical experience with atrial myxomas at the National Institute of Cardiovascular Diseases, Karachi.

MATERIAL & METHODS

From 1985 to 1998, 52 patients, 23 female and 29 male patients underwent treatment for atrial myxoma at the National Institute of Cardiovascular Diseases, Karachi. Their age range was 23 to 53 years. Most common presenting symptom was dyspnea on exertian and palpitation. Clinically few patients had tumor plop. Nearly all of them had middiastolic murmur confusing the diagnosis with mitral valve disease.

Electrocardiogram revealed that all were in sinus rythm. Chest X-Ray showed borderline cardiomegaly. In one female patient there was prominence of pulmonary hilar shadows and cephalization of pulmonary vasculature indicating pulmonary hypertension. Two dimensional echocardiogram accurately diagnosed atrial myxoma in all the cases. Size, site and presence or absence of tumor stalk were clearly demonstrated. None of the cases needed cardiac catheterization for the confirmation.

OPERATIVE FINDINGS

All patients underwent surgical excision of myxoma. In each case tumour was excised during cardiopulmonary bypass with the patient under moderate systemic hypothermia, continous aortic clamp and antegrade cold crystalloid cardioplegia. Chamber containing myxoma was opened, myxoma bluntly enucleated with finger and the stalk

was shaved and diathermized. Cavity was carefully irrigated with saline to remove any tumor fragments. All the myxomas were attached to the atrial septum with few having extension over the posterior wall of left atrium. In none of the case the atrial septum was excised.

RESULTS

Among the 52 patients who underwent surgery there ware 2 perioperative deaths (3.8%). One young female with right atrial sessile myxoma had severe pulmonary hypertension post operatively. She died of low cardiac output in the ICU, the other patient was 53 years female who had perioperative cerebral embolization and could not be weaned off the ventilator. Two other cases were re-explored due to excessive mediastinal bleeding. All other cases had smooth recovery though our follow up is not adequate, the cases coming to out patient clinic are in functional class I.

DISCUSSION

Primary tumors of the heart and pericordium are exceedingly rare, occurring in from 0.01% to 0.28% of the patients[4]. Seventy five percent of these tumors are benign and have good prognosis with surgical treatment[5].

Major presenting symptom of the patient in our series was exertional dyspnea. None of our patients presented with constitutional symptoms, although literature reports upto 90% incidence of constitutional symptoms[6]. None of our case presented with systemic embolism. One young female who presented with pulmonary hypertension was suspected to have pulmonary emboli from right atrial myxoma. Though autopsy studies were not done to confirm or exclude the pulmonary emboli.

Clinically very few patients could be accurately diagnosed. Only those with tumor plop could be suspected to have myxoma. Majority of the cases had primary suspicion of mitral valve disease. A conclusive diagnosis of atrial myxoma was made only after the echocardiographic examination. There was no diagnostic failure with the use of two dimensional echocardiography Echo cardiogram may not give the accurate size of the tumor. Clot over the tumor surface may be misleading. Two dimensional echocardiogram makes differentiation between sessile and pedunculated tumors. Shumaker[7] has argued that the echocardiographic diagnosis of myxoma is so precise as to warrant surgical therapy based only upon this investigation.

We had three cases of biatrial myxoma and one case of right atrial myxoma (1.9%). Literature reports upto 25% incidence of right atrial myxoma[4,8] and 8% incidence of ventricular myxoma. Mitral valve was normal in all the cases except some thicking of the leaplets which is due to wrecking ball phenomenon of the pedunculated myxoma[9].

Our operative technique was simple. The chamber containing myxoma was opened. Bulk of the myxoma was bluntly enucleated with fingers. Stalk of the tumor was shaved and then cauterized. Approach through the atrial septum for L.A myxoma was more cumbersome and adopted in only two cases.

We lost one elderly female of left atrial myxoma who had cerebral embolization. She could not be weaned off ventilator support. The other young female with right atrial myxoma died of low cardiac output. Preoperatively she had severe pulmonary hypertension. She had sessile myxoma with papillary fronds on the surface. Probably she had repeated embolization into the pulmonary circulation leading to pulmonary hypertension. All other cases had smooth recovery.

Our follow up is incomplete. The cases coming to the out patient clinic are in functional class I. No case of myxoma

recurrence have been reported in our series so far.

In conclusion the results of our surgical series have been excellent. In this series the mortality of 3.8% is similar to what has been reported in the literature.

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