Our surgical treatment strategy in a case with giant left atrial myxoma and acute pancreatitis

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Citation

Abstract
The myxomas are considered to be rare benign intracardiac tumors. In this study we present our surgical treatment strategy in a case with giant left atrial myxoma and acute pancreatitis. Our patient underwent excision of myxoma using cardiopulmonary bypass. Early and late results of surgery were acceptable for the patients with benign tumors.

INTRODUCTION

Left atrial myxomas are the most common benign intracardiac tumors(1). Benign primary cardiac tumors have an excellent prognosis in the adult population. Early identification and diagnosis of primary cardiac tumors are necessary for expeditious surgical resection if a cure is desired(2).

CASE PRESENTATION

Our case was a 66-year-old female. She was hospitalized due to acute pancreatitis by the Department of Internal Medicine. During the investigations regarding her dyspnea, a giant left atrial myxoma was revealed and she was then referred to our clinic for urgent operation. Her past medical history was significant for Type II diabetes mellitus that was regulated with oral antidiabetics and hypertension. She didn’t give a history of peripheral emboli. Transthoracic echocardiography showed a hyperechogenous mobile mass of 50x26 mm passing through the mitral valve during each systole, consistent with myxoma. Moreover, there was a moderate pulmonary hypertension measured as 40-45 mm Hg. Valvular structures of the heart manifested no prominent pathology. Her thorax CT demonstrated a hypodense mass of 5-6 cm with a filling defect inside the left atrium, consistent with myxoma (Figures 1&2).
She was operated under endotracheal general anesthesia and in supine position. Following a median sternotomy, pericardium was opened longitudinally. After heparinization, extra-corporeal circulation was established between the venae cavae and the ascending aorta. A cross clamp was placed on aorta and by antegrade intermittent isothermic blood cardioplegia from aortic root, cardiac arrest was established. Hypothermia was moderate (30ºC). Standard left atriotomy was made from interatrial junction. Left atrium was totally filled with a myxomatous mass (Figure 3).

The whole mass was extirpated (Figure 4).

No additional pathology was defined during the exploration of the left structures. Following the irrigation with saline, left atriotomy was closed. Postoperative oral feeding was initiated and consultation with Department of Internal Medicine recommended outpatient follow-up. Histological analysis of the lesion demonstrated typical microscopic features of a benign atrial myxoma.

DISCUSSION

For primary cardiac tumors, 34 patients who underwent surgical treatment at the Kanazawa University Hospital were analyzed and the literature was reviewed. The 34 patients were divided into 3 categories: (i) myxomas; (ii) benign non-
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myxomas; and (iii) malignant tumors. Twenty-three patients (70%) were diagnosed with myxomas, including 22 left atrial myxomas and 1 right atrial myxoma(3).

In the study of Piazza et al; twenty-one patients resected for primary cardiac tumours. There were 16 myxomas (76%). In adults, myxoma was the most common primary cardiac tumour (88%) (2).

In the study of Bakkali et al.; 23 patients were operated in their service for cardiac myxoma. There were 21 left-atrium myxomas and two in right atrium. The sex-ratio was 2.28 (16 women and seven men). The 19 symptomatic patients had different symptoms: dyspnea, palpitations, left ventricular failure, positional syncope, systemic embolism, chest pain or right ventricular failure. The diagnostic of myxoma was realized in all cases by echocardiography(4).

In the study of Jelic et al.; clinical manifestations varied from no symptoms and very poor or no clinical signs to various manifestations of chronic or acute congestive heart failure, syncope and arrhythmias with or without systemic findings such as high erythrocyte sedimentation rate, anaemia, leucocytosis, elevated gamma globulin, thrombocytopenia or low grade fever, as well as cerebrovascular accidents due to tumour embolization. Cardiac symptoms were predominant in 54 pts (66.6%) and cerebrovascular in 20 pts (24.7%). The tumour was located in the left atrium in 62 pts (76.5%) and in the right atrium in 19 pts (23.5%). The average waiting for the operation was 9 days (range from 1 to 60 days) (5).

The third arm of the classic triad consists of constitutional symptoms (34%) with fever, weight loss, or symptoms resembling connective tissue disease, due to cytokine (interleukin-6) secretion (6).

Histopathological techniques show the presence of lymphoplasmocytic infiltration, the sign of secretion of interleukin 6 by the myxoma, a cytokine involved in the general inflammatory process and which explains the unusual clinical presentation sometimes observed (7). Serious complications of left atrial myxoma include systemic embolism. Clinico-pathological correlations showed that mitral stenotic effects occurred when the tumour diameter exceeded 5 cm and embolism was associated with tumours having multiple villositi (7).

Operation for left atrial myxoma can be undertaken solely on the basis of echocardiographic findings(1). The greater number of myxoma patients can be diagnosed preoperatively after 1977 reflects the introduction of echocardiography as a noninvasive diagnostic procedure(6).

Surgical excision of left atrial myxomas must be performed as soon as possible after diagnosis is established because of the high risk of valvular obstruction or systemic embolization (1).

In conclusion; the myxoma is considered to be rare, and remains classical emergency with low operative risk (4). Surgical intervention can be curative for patients with left atrial myxomas and most of these can expect an excellent outcome. Since late recurrence, long-term clinical and echocardiographic follow-up is recommended (1). The recurrence rate is low (5%), but long-term follow-up and serial echocardiography are advisable especially for young patients (6).

References

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