Case Reports

Right Atrial Myxoma in an Infant

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SUMMARY

Cardiac myxomas are extremely rare in infancy. We report a case of right atrial myxoma in a 35-day-old male infant (with cyanosis and convulsions). Echocardiography was carried out and a diagnosis of right atrial myxoma was made. Open heart surgery was performed using cardiopulmonary bypass and a 2.5×3.0 cm mass was removed. The patient's postoperative course was uneventful. To our knowledge there is no previously reported case of right atrial myxoma in such a young infant which was operated on successfully.

Additional Indexing Words:
Myxoma Right atrium

CARDIAC myxomas are the most common primary cardiac tumors in childhood,[1] but are extremely rare in infancy. When they do occur, they are usually found in the left atrium. Seventy-five percent of myxomas originate in the left atrium, 20–25% occur in the right atrium and only rarely are they seen in either of the ventricles.[1)-3)]

Right atrial myxoma is a rare cause of heart failure in infancy and childhood. The antemortem diagnosis and successful surgical removal of a right atrial myxoma in infancy have not been previously reported. We report a case of right atrial myxoma simulating cyanotic congenital heart disease in a 35-day-old male infant.

CASE REPORT

A 35-day-old male infant was admitted to the Hacettepe University Hospital with cyanosis and convulsions. He was apparently well until 4

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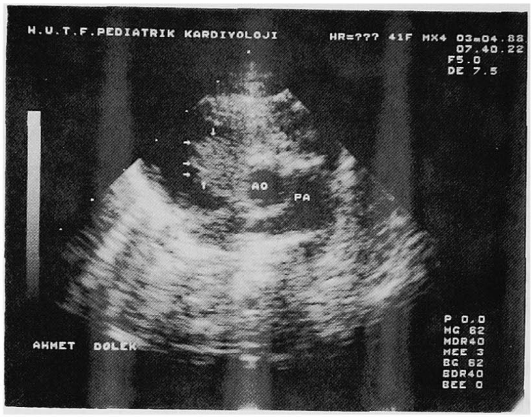

Fig. 1. Initial echocardiogram (apical 4-chamber projection) revealing the presence of myxomas (arrow) in the right atrium.

Fig. 2. Right atrial myxoma is seen.

days prior to admission to our hospital when he developed cyanosis and convulsions. His weight was 4,500 g, the heart rate was 120/min, and the respiratory rate was 40/min. A grade 2/6 systolic murmur was heard along the left sternal border and over the apex. The lung fields were clear. The liver was palpable 3–4 cm below the right costal margin. There was no clubbing.

Laboratory data: The hemoglobin value was 16.5 g/100 ml; hematocrit level was 49%. There was no evidence of atrial or ventricular hypertrophy. Chest x ray demonstrated minimal cardiomegaly. Echocardiography showed a mass in the right atrium (Fig. 1).

Emergency surgery was performed on March 4, 1988. Cardiopulmonary bypass was established. Hypothermia (26°C) and cold K^+ cardio-

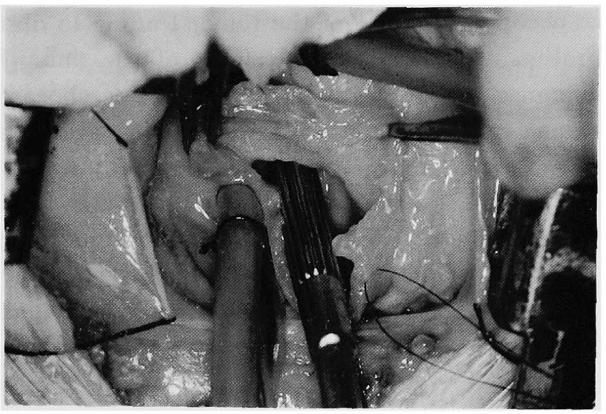

Fig. 3. Right atrial myxoma is removed.

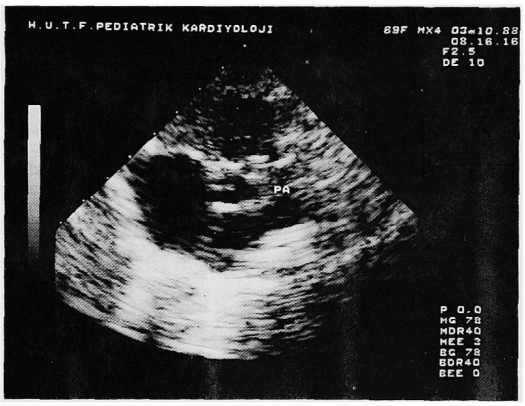

Fig. 4. Postoperative echocardiogram (apical 4-chamber projection).

plegia were applied. A right atriotomy was made and the tumor, approximately 2.5×3 cm in diamater, projecting through the tricuspid valve was removed by excising the septum (Figs. 2 and 3). Postoperative course was uneventful. Echocardiography was normal (Fig. 4). No cyanosis nor heart murmurs were noted at follow-up examinations.

Discussion

Cardiac myxomas are extremely rare in infancy. They are seen in all chambers of the heart but most frequently in the left atrium. Approximately one fourth occur in the right atrium.[1),4),5)] The most infrequent location for myxoma is the left ventricle.[6),7)]

The clinical manifestations of right atrial myxoma can be attributed to

either the space occupying nature of the tumor leading to obstruction, or to arterial embolization and constitutional effects of the tumor.[5),8)] Recently diagnosis of myxomas has been easily confirmed by echocardiography. A right atrial myxoma can imitate other diseases and the differential diagnosis should include tricuspid stenosis, constrictive pericarditis, Ebstein anomaly, myocarditis, superior vena cava obstruction, rheumatic fever or bacterial endocarditis involving the tricuspid valve or carcinoid syndrome.[9)]

Calcified myxomas are rare, they do occur more often in the right atrium.[10)] Atrial myxomas should be resected with the surrounding full thickness atrial wall whenever feasible.[11)] Recurrence of a myxoma in a separate chamber or site has been reported.[12)]

References

1. Fine G: Neoplasms of the pericardium and heart. *in* Pathology of the Heart and Blood Vessels, 3rd Ed, ed by Gould SE, Springfield, CC Thomas, p 851, 1968
2. Pietro D, Parisi A: Intracardiac masses. Med Clin North Am **64**: 239, 1980
3. Daubenton JD, Human DG, Hassoular J, Mills AE: Left atrial myxoma in a 13-month-old infant. S Afr Med J **68**: 261, 1985
4. Hansen JF, Lyngborg K, Andersen M, Weenevold A: Right atrial myxoma. Acta Med Scand **186**: 165, 1969
5. Okada M, Ohta T, Yasuoka S, Matsuda S, Shida T, Nakamura K, Asada S: Surgical management of intracavitary cardiac tumors. A review of fifteen patients and current status in Japan. J Cardiovasc Surg **27**: 641, 1986
6. Silverman NA: Primary cardiac tumors. Ann Surg **191**: 127, 1980
7. Palazzuoli V, Mondillo S, Angelini GD, Breckenridge IM, Kristodhullu A, Caniggia A: Myxoma of the left ventricle. Thorac Cardiovasc Surgeon **34**: 271, 1986
8. Sanyal S, DeLeuchtenberg N, Rojas RH, Stansel HC, Browne MJ: Right atrial myxoma in infancy and childhood. Am J Cardiol **20**: 263, 1967
9. Burech DL, Teske DW, Haynes RE: Right atrial myxoma in a child. Am J Dis Child **131**: 750, 1977
10. Crawford FA, Selby JH Jr, Watson D, Joransen J: Unusual aspects of atrial myxoma. Ann Surg **188**: 240, 1978
11. Milgarter E, Lotan H, Schuger L, Ben-Horin Y, Uretzky G, Appelbaum A, Borman VB: Cardiac myxomas—surgical experience with a multi-faceted tumor. Thorac Cardiovasc Surgeon **35**: 115, 1987
12. Martin LW, Wasserman AG, Goldstein H, Steinberg JS, Mills M, Katz RJ: Multiple cardiac myxomas with multiple recurrences: Unusual presentation of a benign tumor. Ann Thorac Surg **44**: 77, 1987