

Images in Cardiovascular Disease



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A Case of Rapidly Growing Cardiac Myxoma Within a Year Causing Heart Failure

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A 54-year-old female visited the emergency department due to dyspnea for 3 weeks. Physical examination revealed a clear breathing sound and regular heart sound with a mid-diastolic murmur. Chest X-ray demonstrated mild cardiomegaly. Laboratory findings showed mildly elevated brain natriuretic peptide (187 pg/mL). Her transthoracic echocardiography (TTE) for health check-up was unremarkable 10 months ago (**Movie 1**).

However, TTE revealed a mobile, echogenic mass in LA which caused severe mitral stenosis (**Figures 1, 2A and B, Movies 2 and 3**). Transesophageal echocardiography showed a 6.0 × 4.4 cm-sized, multi-lobulated mass attached at LA (**Figure 2C, Movies 4 and 5**). Computed tomography (CT) revealed a large, low attenuated filling defect with a volume of 46.8 cm³ in LA (**Figure 2D**). Based on the findings from echocardiography and CT, we diagnosed myxoma which caused functional mitral stenosis and heart failure. Mass excision surgery was done considering its size and hemodynamic significance. Excised mass was confirmed as myxoma pathologically (**Figure 3**). Postoperative TTE found normal mitral function with complete resection of the previous mass.

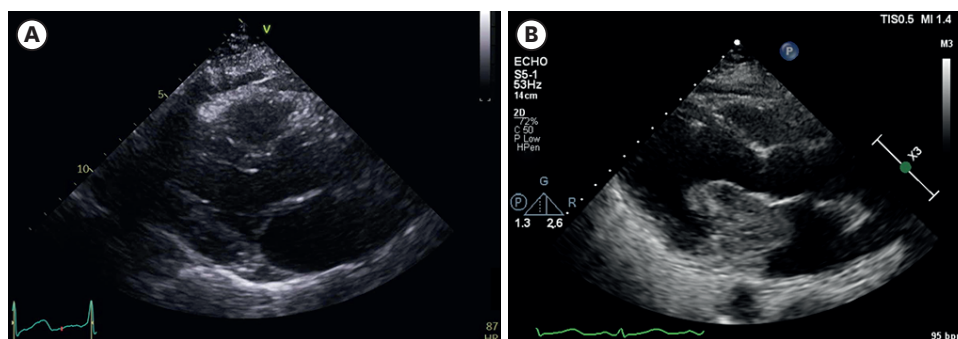


Figure 1. Comparison of echocardiographic images. (A) No abnormal mass in LA 10 months ago. (B) LA mass suggestive of myxoma. LA: left atrial.

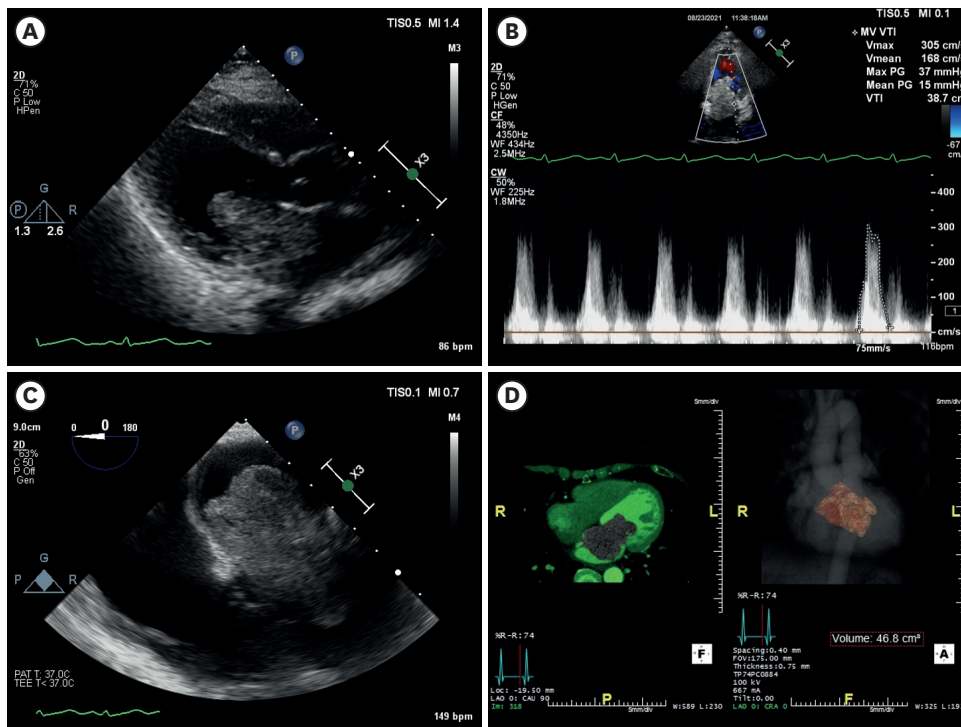


Figure 2. Transthoracic echocardiography demonstrated a mobile, echogenic mass in LA (A) causing severe mitral stenosis (B). Transesophageal echocardiography image of mid-esophageal 180° view showed 6.0 × 4.4 cm-sized, multi-lobulated mass attached at LA (C). Computed tomography angiography image revealed a large mass in LA (D).
LA: left atrial.

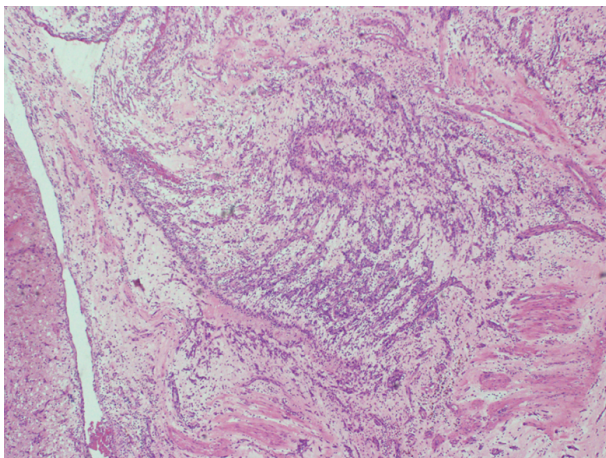


Figure 3. Pathologically confirmed myxoma. Histology showed multi-lobulated structures with myxoid stroma (hematoxylin and eosin staining).

The growth rate of a cardiac myxoma has been reported variously. In a case of myxoma, its size increased approximately 7-fold during 6 years.¹⁾ In another case followed up for nearly 30 years, the size of the myxoma was increased then decreased.²⁾ Our case highlights a rare cause of heart failure due to a large myxoma with an exceptional growth rate confirmed by a multi-imaging modality.

Written informed consent was obtained from the patient for publication of this article.

SUPPLEMENTARY MATERIALS

Movie 1

No intra-cardiac mass in previous transthoracic echocardiography 10 months ago.

[Click here to view](#)

Movie 2

Echogenic mass in the left atrium from parasternal-long axis view.

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Movie 3

Echogenic mass in the left atrium from apical 4-chamber view.

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Movie 4

Transesophageal echocardiographic image; echogenic, huge, multi-lobulated mass in the left atrium with 2D image.

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Movie 5

Transesophageal echocardiographic image: echogenic, huge, multi-lobulated mass in the left atrium with 3D image.

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Conflict of Interest

The authors have no financial conflicts of interest.

Author Contributions

Conceptualization: Lee J; Writing - original draft: Nam DH, Lee J; Writing - review & editing: Nam DH, Lee J, Kim H, Heo R.

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