Türk Göğüs Kalp Damar Cerrahisi Dergisi 2012;20(4):926-928
doi: 10.5606/tgkdc.dergisi.2012.182

De novo right atrial myxoma detected nine months after atrial septal defect closure

Atriyal septal defekt kapatılmasından dokuz ay sonra saptanan de novo sağ atriyal miksoması

Orhan Saim Demirtürk, Öner Gülcan, Hüseyin Ali Tünel, Murat Güvener

Department of Cardiovascular Surgery, Başkent University Adana Teaching and Research Center, Adana, Turkey

Primary tumors of the heart is rarely seen and atrial myxoma is the most common primary tumor of the heart. In this article, we present a 21-year-old male case with the history of atrial septal defect closure in another clinic who developed de novo right atrial myxoma nine months after surgery.

Key words: Atrial septal defect; de novo right atrial myxoma; rapid growth.

Kalbin primer tümörleri seyrek rastlanan tümörler olup, en sık görülen primer kalp tümörü miksomadır. Bu makalede daha önce başka bir merkezde atriyal septal defekt kapatılması öyküsü olan ve ameliyattan dokuz ay sonra de novo sağ atriyal miksoması gelişen 21 yaşında erkek bir olgu sunuldu.

Anahtar sözcükler: Atriyal septal defekt; de novo sağ atriyal miksoması; hızlı büyüme.

Primary tumors of the heart are rare, and atrial myxoma is the most common type. Its rapid growth has been reported in the English literature in some unusual cases. To the best of our knowledge, our particular case is the fastest growing adult right atrial myxoma thus far reported. We operated on a 21-year-old man diagnosed with a right atrial mass and a previous history of an atrial septal defect closure that was identified nine months earlier in another clinic.

Primary cardiac tumors have been reported in autopsy series with an incidence rate from 0.001-0.03%, with 75% of these being benign. Half of these benign tumors are myxomas[1] that usually occur between the third and sixth decades of life.[2] The growth speed of myxomas has been sporadically reported. Our case was a 21-year-old male patient who applied to our clinic with the diagnosis of a right atrial mass which had been coincidentally found on a routine examination nine months earlier after open heart surgery for a secundum-type atrial septal defect. Our research indicated that this case is the fastest growing right atrial myxoma in an adult patient detected after surgical atrial septal defect closure, and this finding led us to share this knowledge with the cardiovascular community.

CASE REPORT

A 21-year-old male patient was referred to our clinic with the diagnosis of a right atrial mass. He had undergone open heart surgery for closure of a secundum-type atrial septal defect nine months prior to his referral. However, no right atrial mass was discovered during the operation. The tumor had been coincidentally detected by transthoracic echocardiography during a routine health check-up by his insurance company.

The patient was asymptomatic at the time of admission, and his laboratory findings were within normal limits. His transthoracic echocardiogram revealed a pedunculated, clearly delineated mass of 2.3x2.46 cm in diameter adjoining the superior vena cava.

He was operated on using femoral artery-femoral vein cannulation and a subsequent median sternotomy and selective superior vena cava cannulation. The right atrium was opened carefully after cardiac arrest

Available online at
www.tgkdc.dergisi.org
doi: 10.5606/tgkdc.dergisi.2012.182
QR (Quick Response) Code

Received: March 6, 2010 *Accepted*: May 24, 2010

Correspondence: Orhan Saim Demirtürk, M.D. Başkent Üniversitesi Adana Uygulama ve Araştırma Merkezi, Kalp ve Damar Cerrahisi Kliniği, 01250 Yüreğir Adana, Turkey.

Tel: +90 322 - 327 27 27 e-mail: osdemirturk@yahoo.com

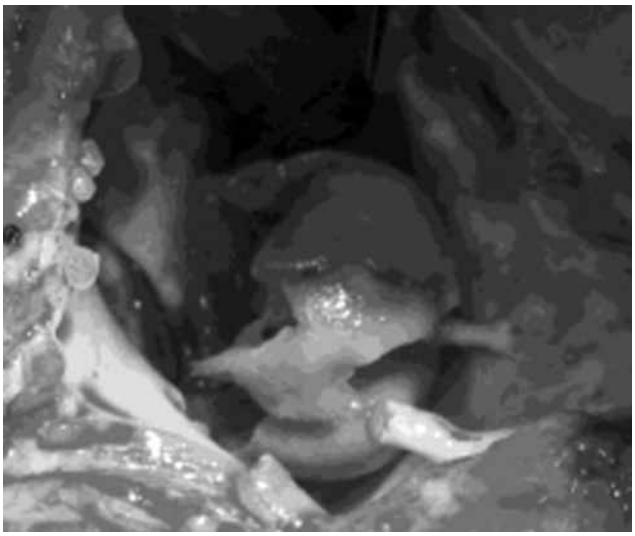

Figure 1. The surgically exposed myxoma.

was maintained with normothermic antegrade blood cardioplegia. We found a 2x3 cm mass attached to the lateral wall of the right atrium with a 2 mm peduncle (Figure 1). The mass was excised from the right atrial wall along with its base. After excision, the tumor dimensions measured 2.3x2.1x1.5 cm, and it was diagnosed as myxoma after histopathological examination.

The postoperative period was uneventful, and the patient was discharged on the fourth postoperative day. He is currently being followed up in the postoperative 35th month, and no problems have been reported.

DISCUSSION

Primary cardiac tumors are very rare but have multi-faceted clinical presentations which are great masqueraders.[3] According to a recent series, 82.4% of myxomas occur in the left atrium, 14% in the right atrium, and 3.6% are biatrial.[4] The clinical course of atrial myxomas is characterized by a triad of obstructive, embolic, or so-called constitutional symptoms,[1,3] but they may be silent, too. The clinical course of symptomatic myxomas most commonly includes obstructive symptoms represented by dyspnea, pulmonary edema, or syncope. Embolic symptoms are characteristically cerebral or sometimes peripheral.[3] Constitutional symptoms are observed in about half of the patients and include fever of unknown origin,[5] weight loss, myalgia, arthralgia, rashes, and fatigue.[1,3] Because of these symptoms, myxomas are easily confused with other diseases like rheumatoid arthritis (RA), vasculitis, collagen diseases, infective endocarditis, and various malignancies.[1,6]

Our patient was asymptomatic, and his diagnosis was coincidental but also consequential. Myxomas, when diagnosed, are best cured by surgery and have a very low recurrence rate of only 1-3%.[6]

In the English literature, there are cases of left atrial myxoma recurrences as early as five months after excision for myxoma,[7] de novo left atrial development of myxoma eight months after previous coronary bypass surgery when no evidence of myxoma was present,[8] and de novo right atrial myxoma detection in a child who had been diagnosed with a double outlet right ventricle six months earlier.[9] There is also a report of a patient who was accidentally found to have a right atrial mass that was later diagnosed as myxoma after surgery.[10] The patient had no signs of myxoma a few months previously when she had been treated via the transcatheter method for atrial fibrillation, and she had undergone no previous surgical procedures. In addition, there is a report of a right atrial myxoma that developed four years after patch closure of an atrial septal defect.[11]

In conclusion, we believe that our case is the first adult patient who rapidly developed a right atrial myxoma nine months after open heart surgery for an atrial septal defect. We hope that sharing this information will benefit the medical community at large and promote further study.

Declaration of conflicting interests

The authors declared no conflicts of interest with respect to the authorship and/or publication of this article.

Funding

The authors received no financial support for the research and/or authorship of this article.

REFERENCES

1. Butany J, Nair V, Naseemuddin A, Nair GM, Catton C, Yau T. Cardiac tumours: diagnosis and management. Lancet Oncol 2005;6:219-28.
2. Hatemi AC, Gürsoy M, Tongut A, Ozgöl I, Cetin G, Uzunhasan I, et al. Left atrial myxoma in association with atrial septal defect in a patient with acute myocardial infarction;an uncommon association with an unusual presentation. Anadolu Kardiyol Derg 2009;9:257-8.
3. Patel R, Lynn KC. Masquerading myxoma. Am J Med Sci 2009;338:161-3.
4. Kuroczynski W, Peivandi AA, Ewald P, Pruefer D, Heinemann M, Vahl CF. Cardiac myxomas: short- and long-term follow-up. Cardiol J 2009;16:447-54.
5. Linares JA, Toyas C, Lacambra I, Ballester C. Fever of unknown origin and jaundice as the clinical presentation of myxoma of the right atrium. Rev Esp Cardiol 2008;61:220-2.

6. Reynen K. Cardiac myxomas. N Engl J Med 1995; 333:1610-7.
7. Hermans K, Jaarsma W, Plokker HW, Cramer MJ, Morshuis WJ. Four cardiac myxomas diagnosed three times in one patient. Eur J Echocardiogr 2003;4:336-8.
8. Roudaut R, Gosse P, Dallocchio M. Rapid growth of a left atrial myxoma shown by echocardiography. Br Heart J 1987;58:413-6.
9. Goldberg BE, Romano AA, Amato JJ, Valderrama E, Bierman FZ. Unique association of a rapidly growing right atrial myxoma in a child with double-outlet right ventricle. Pediatr Cardiol 1997;18:303-5.
10. Ancona R, Comenale Pinto S, Caso P, Di Palma V, Pisacane F, Martiniello AR, et al. Right atrial mass following transcatheter radiofrequency ablation for recurrent atrial fibrillation: thrombus, endocarditis or mixoma? Monaldi Arch Chest Dis 2009;72:40-2.
11. Suzuki I, Koide S, Odagiri S, Shohtsu A. Right atrial myxoma developing 4 years following patch closure of an atrial septal defect: report of a case. Surg Today 1994;24:176-8.