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Right Atrial Mass Mimicking Atrial Myxoma Revealed by Heart Failure

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ABSTRACT
Right atrial myxoma is a rare disease and its clinical presentation is not specific. The usual mode of revelation is heart failure. The differential diagnosis of myxoma can be a thrombus, especially in case of atrial fibrillation. Trans-thoracic echocardiography allows diagnosis. Treatment by surgical excision should be done quickly to avoid complications. We present a case of a 44-year-old woman who was admitted to intensive care unit for heart failure. The echocardiography and Computed tomography (CT) showed a right atrial mass mimicking atrial myxoma. She died a few days later.

Introduction

Right atrial myxoma is a rare disease and its clinical presentation is not specific whose diagnosis is carried by echocardiography. The usual mode of revelation is heart failure. The most frequent complications are pulmonary embolism. A 44-year-old woman was admitted to intensive care unit for heart failure. The echocardiography and Computed tomography (CT) showed a right atrial mass mimicking atrial myxoma. She died a few days later.

Case Report

This is a 44-year-old patient with no significant history of disease who presented seven days before admission à large edema of the lower extremities and dyspnea class IV of NYHA.

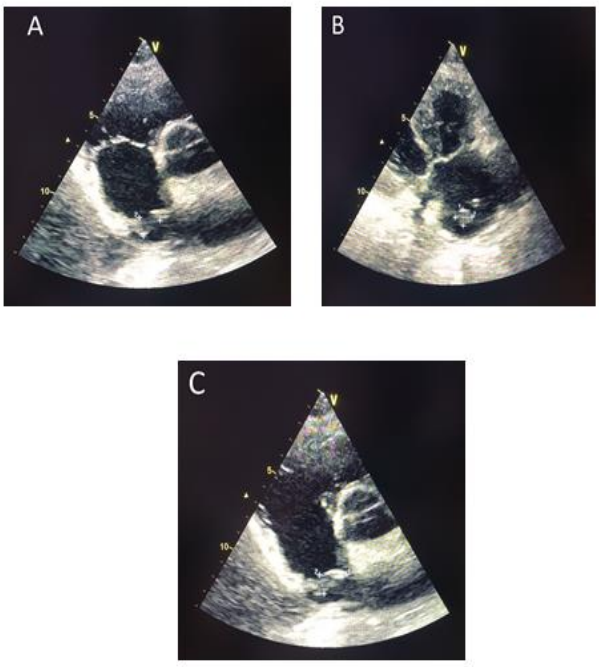

Fig1. Transthoracic echocardiography showed a mobile mass in the right atrium.

The clinical examination found a blood pressure at 110/60 mmHg, a pulse at 130 per minute, large edema of the lower limbs extended to the thighs, hepatic jugular reflux. Auscultation does not find a breath. The electrocardiogram objectified atrial fibrillation at 130 beats per minute. The chest X-ray finds a bilateral pleural effusion. The biological examinations do not find an inflammatory syndrome), the assay of Pro BNP is at 9600 ng/l. A transthoracic echocardiography demonstrated a homogenous right atrial mass (Fig.1A, 1B, 1C) associated with significant pulmonary arterial hypertension. Chest computed tomography (CT) confirmed the presence of a mass in the right atrium, 29.9×21.4 mm in size (Fig.2), with focal calcification, gelatinous external appearance and smooth surface. The most likely diagnosis was myxoma of the right atrium. Medical treatment is instituted by diuretics, but unfortunately the patient died a few days later.

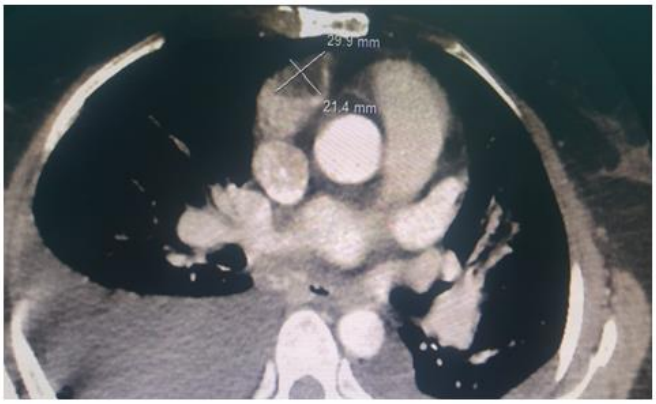

Fig2. Computed tomography showed mass in the right atrium.

Discussion

The formation of the mural thrombi in the right side of the heart is rare [1]. Atrial fibrillation is a precipitating factor for thrombus formation, mainly in the left atrium. [2]. On the contrary, approximately 15% of all cases of cardiac myxoma

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arises in the right atrium [3, 4]. Cardiac myxoma may present as valve obstruction, systemic embolization, constitutional symptoms, and/or hematological disturbances [3,4,5].

The average age of development of myxoma is 50 years. Two thirds of patients are women. The differential diagnosis of myxoma can be a thrombus, especially in case of atrial fibrillation, another benign tumor (fibroelastoma, lipoma, rhabdomyoma, teratoma ...), a malignant tumor: metastasis or other primary malignant tumor (angiosarcoma, rhabdomyo-sarcoma , lymphomas ...) [6].

Echocardiography is accepted as a first-line imaging method for diagnosis of a cardiac mass [7]. In cases in which the echocardiography characterization of the cardiac mass is incomplete, CT and cardiac magnetic resonance (CMR) are helpful. This is particularly true in the determination of the relationship of normal cardiac structure and tumor extension to adjacent vascular and mediastinal structures, infiltration into the pericardium, influence on cardiac function and surgical planning [8,9]. Contrary to the mural thrombus which show less motion during the cardiac cycle, a broad-based attachment to the heart wall, and occasional focal calcification, imaging features that favor a diagnosis of myxoma are a mobile, pedunculated appearance with smooth, gelatinous surface and a stalk most frequently attached on the interatrial septum near the fossa ovalis [3,7,8]. However, the right atrial myxoma may be attached to other segments of the atrial wall, appear less mobile, and is more likely to be calcified than myxomas of the left atrium. [3,4,7,8]. Therefore, although mural cardiac thrombi and myxomas have some imaging specificity, most features show considerable overlap and, even after careful examination, it is not always possible to differentiate one entity from the other. Thus, imaging presentation of the right atrial mass (slightly mobile, low attenuated mass with focal calcification, gelatinous external appearance and smooth contour), suggested myxoma as the most likely diagnosis in our patient.

Treatment is based on surgical excision [10]. Electrocoagulation of the base of implantation of the myxoma and excision of a part of healthy endocardium seems to prevent recurrence [11]. In case of extension to the pulmonary artery or suspicion of pulmonary embolism, an exploration of the pulmonary artery must be carried out for embolectomy [12]. The risk of operative mortality is close to 1% [6]. The risk of recurrence is low (1-5%) [13].

Conclusion

Myxoma of the right atrium is a rare pathology, whose mode of revelation is variable and whose diagnosis can be evoked by the appearance of signs of right heart failure or pulmonary embolism. The differential diagnosis of myxoma can be a thrombus, especially in case of atrial fibrillation. Trans-thoracic echocardiography allows diagnosis. Treatment by surgical excision should be done quickly to avoid complications.

References

[1]:Kurisu S, Inoue I, Kawagoe T, Ishihara M, Shimatani Y, Hata T, et al. Right atrial thrombosis as a complication of arrhythmogenic right ventricular cardiomyopathy. Intern Med 2006; 45: 457-460.

[2]:Singer DE, Albers GW, Dalen JE, Fang MC, Go AS, Halperin JL, et al. Antithrombotic therapy in atrial fibrillation: American College of Chest Physicians Evidence-Based Clinical Practice Guidelines (8th Edition). Chest 2008; 133: 546S-592S

[3]:Reynen K. Cardiac myxomas. N Engl J Med 1995; 333: 1610-1617.

[4]:Fabijanic D, Rudez I, Kardum D, Radic M, Glavas D, Lozo P. Pulmonary embolism due to the right atrial myxoma. Coll Antropol 2006; 30: 933-936.

[5]:Zhang J, Duan ZQ, Wang CJ, Song QB, Luo YW, Xin SJ. Acute aortic occlusion as an unusual embolic complication of cardiac myxoma. Chin Med J 2006; 119: 342-344.

[6]: Lepillier A, Chaib A, Bougouin W et al. Volumineux myxome de l'oreillette droite révélé par une insuffisance cardiaque congestive / Annales de Cardiologie et d'Angéiologie 59 (2010) 37–39

[7]:Otto MC. Cardiac masses and potential cardiac source of embolus. In: Otto CM, ed. Textbook of clinical echocardiography, 3th ed. Philadelphia: Saunders; 2004: 407-429.

[8]:Scheffel H, Baumueller S, Stolzmann P, Leschka S, Plass A, et al. Atrial myxomas and thrombi: comparison of imaging features on CT. Am J Roentgenol 2009; 192: 639-645.

[9]:O'Donnell DH, Abbara S, Chaithiraphan V, Yared K, Killeen RP, Cury RC, et al. Cardiac tumors: optimal cardiac MR sequences and spectrum of imaging appearances. AJR Am J Roentgenol. 2009; 193: 377-387.

[10]:Bitner M, Jaszewski R, Wojtasik L, Zaslonk J. Unusual course of right atrial myxoma, masked by acute abdominal pain, and complicated by pulmonary embolus. Scand Cardiovasc J 1998;3(6):371–3.

[11]:Miralles A, Barcamonte L, Sonsul H, et al. Cardiac tumors: clinical expe-rience and surgical result in 74 patients. Ann Thorac Surg 1991;52:886–95.

[12]:Selvaraj A, Kumar R, Ravikumar E. Surgical management of right atrial myxomas. A 15-year experience with review of literature. J Cardiovasc Surg (Torino) 1999;4(1):101–5.

[13]:Shinfeld A, Katsumata T, Westaby S. Recurrent cardiac myxoma: seeding or multifocal disease? Ann Thorac Surg 1998;66:285–8.