Open Journal of
Clinical & Medical
Case Reports

Volume 1 (2015)
Issue 5

ISSN 2379-1039

Right Apical Mass in a Patient Referred for Pathologic Fracture of Tibia

Carlo Rostagno*,Alessandro Cartei, Alessandra Cammilli, Gian Luca Polidori, Claudia Ranalli

***Carlo Rostagno**

Department of Experimental and Clinical Medicine, University of Florence Viale Morgagni 85 , 50134 - Florence, Italy. Email: carlo.rostagno@unifi.it

Abstract

Intra cardiac metastases of pelvic carcinoma are rare and more frequently affect right atrium or right ventricle due to hematogenous spreading. We report the case of 74-year-old woman with a history of hypertension and atrial fibrillation in warfarin thrombo prophylaxis presented with worsening pain and functional impairment at her left leg due to osteolytic lesion of the tibia due to a metastasis of uterine neoplasm. A routine echocardiography showed irregular, non homogeneous mass of 4 x 4 cm occupying he apex and most of the right ventricular cavity. The characteristics of the lesion at CT scan and MRI sustained the first suspect of a cardiac metastasis.

Keywords

Pelvic Carcinoma; Apical mass; Tibia

Introduction

Commonly observed sites for spread of uterine carcinoma include the lung, bones, cervical region, and supraclavicular lymph nodes. Intra cardiac metastases of pelvic carcinoma are rare (1-3%) and more frequently affect right atrium or right ventricle due to hematogenous spreading (1-2) Sometimes metastasis can present as pulmonary emboli. The filtering role of the pulmonary circulation account for the low incidence in left cardiac chambers (3). Clinical diagnosis of cardiac metastases is difficult and may go unrecognized until autopsy (4). Routine echocardiography may sometimes disclose unsuspected cardiac involvement (5).

Case Report

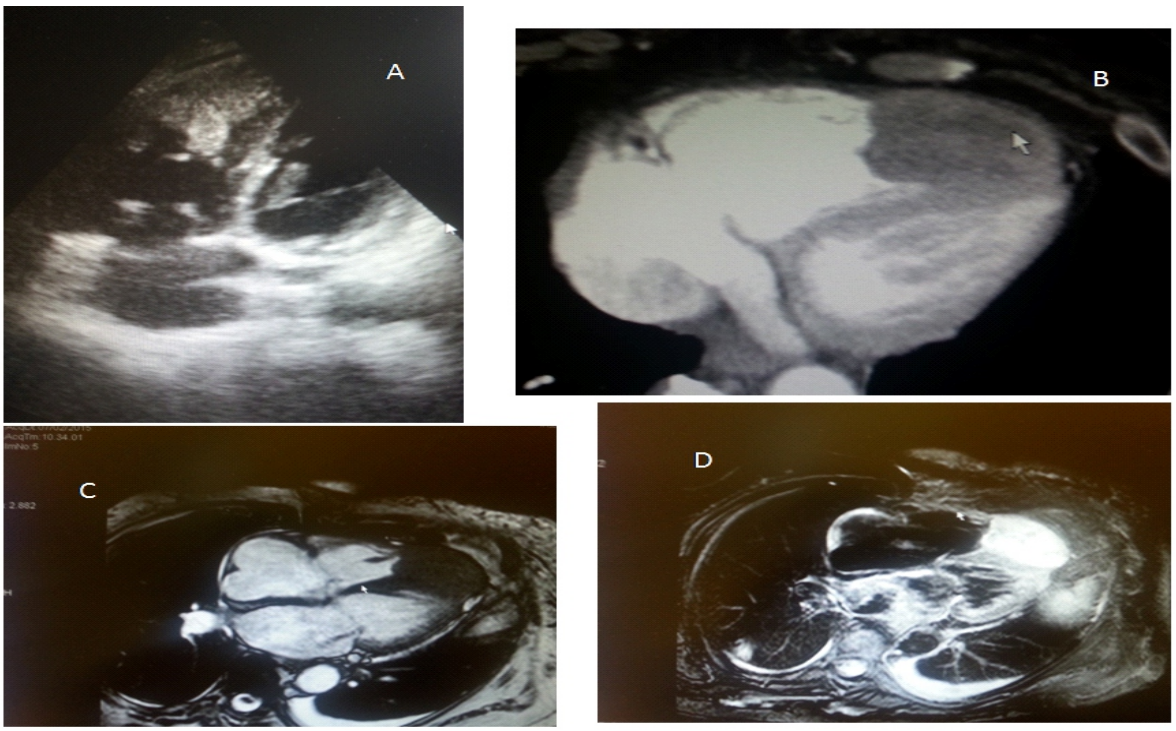
A 74-year-old woman with a history of hypertension and atrial fibrillation in warfarin thrombo prophylaxis presented with worsening pain and functional impairment at her left leg. An X –ray showed an osteolyticlesion with pathologic fracture of the tibia. A CT confirmed the anatomic diagnosis. A hypothesis of a secondary bone lesion was made and ìthe search for primary neoplasm started. On examination at admission, the blood pressure was 140/100 mmHg, heart rate 93 beat/min. Electrocardiogram confirmed atrial fibrillation. At 2D echocardiogram left atrium was dilated. Normal

aortic root, aortic valve and mitral valve leaflets showed mild fibrosis. Mitral valve annulus was calcific. Mild posterior mitral regurgitation. No abnormalities of left ventricle with normal systolic function. Right atrium was dilated. The apex and most of the right ventricular cavity was occupied by a irregular, non homogeneous mass of 4 x 4 cm (panel A). Mild to moderate tricuspid regurgitation with RV/RD gradient 35 mmHg. Inferior vena cava diameter was 22 mm. CT scan and MNR, direct and after gadolinium administration, confirmed the presence of a large mass occupying the apex of right ventricle with implant on the free wall but infiltrating right inter ventricular septum (panel B and C). The mass showed a relevant enhancement after administration of gadolinium (panel D). Contrast-enhanced abdominal computed tomography revealed alarge mass of the uterus. The patient underwent bone biopsy under X ray guidance. Histological examination showed a low-grade differentiation carcinoma, infiltrating bone tissue, cytocheratin AE1/A3 +, napsin -, p63 -, thyroglobulin - .

Discussion

Cardiac metastases in patients with uterine carcinoma are uncommon and frequently asymptomatic (1), however arrhythmias, dyspnea and rarely pulmonary embolism may occur before clinical diagnosis (6). In the case reported the heart lesion was discovered by chance at a routine echocardiography examination before orthopedic surgery to treat pathological fracture of the tibia. The site of the lesion and its characteristics at CT scan and MRI confirmed the first diagnostic hypothesis after echocardiography of a cardiac metastasis. The results of bone biopsy showing a low grade differentiation carcinoma, associated to CT evidence of a large uterine mass, suggested a pelvic source of the neoplasm. Due to the widespread diffusion of disease and the high risk related to intra cardiac biopsy, we could not have histological confirm of clinical diagnosis. For further diagnostic and therapeutic evaluation the patient was referred to oncologic service of our hospital.

Figure



Panel A: modified 2D 4 chambers echocardiography showing a right apical mass (4 x 4 cm)
Panel B: CT Scan
Panel C MRI & Panel D MRI: Enhancement MRI after administration of gadolinium

References

1. Mukai K, Shinkai T, Tominaga K, Shimosato Y. The incidence of secondary tumors of the heart and pericardium: a 10-year study. Jpn J ClinOncol. 1988;11:195–201

2. Bigsby GE 4th, Holloway RW, Weppelman B, Reynolds RB, Williams B. Endometroid adenocarcinoma of theuteruswithcardiacmetastasis. A case report and six-year follow-up. GynecolOncol. 2005 Apr;97(1):256-9

3. Lam KY, Dickens P, Chan AC. Tumors of the heart. A 20-year experience with a review of 12,485 consecutive autopsies. Arch Pathol Lab Med. 1993;11:1027–1031

4. Butany J, Leong SW, Carmichael K, Komeda M.A 30-year analysis of cardiac neoplasms at autopsy. Can J Cardiol. 2005; 21: 675-680

5. Vargas-Barron J, Keirns C, Barragan-Garcia R, Beltran-Ortega A, Rotberg T, Santana-Gonzalez A, Salazar-Davila E. Intracardiac extension of malignantuterinetumors. Echocardiographic detection and successful surgical resection.JThoracCardiovasc Surg. 1990 Jun;99(6):1099-103

6. Byun SW[1], Park ST, Ki EY, Song H, Hong SH, Park JSIntracardiac metastasis from knowncervical cancer: a case report and literaturereviewWorld J SurgOncol. 2013 May 23;11:107. doi: 10.1186/1477-7819-11-107

Acknowledgements

The paper is part of a project financed by a Grant from Italian Health Ministry and Regione Toscana: CUP D11J12000380003

Manuscript Information: Received: July 17, 2015; Accepted: August 19, 2015; Published: August 25, 2015

Authors Information: Carlo Rostagno*,Alessandro Cartei, Alessandra Cammilli, Gian Luca Polidori, Claudia Ranalli

Department of Experimental and Clinical Medicine, University of Florence Viale Morgagni 85 , 50134 - Florence, Italy

Citation: Rostagno C, Cartei A, Cammilli A, Polidori GL, Ranalli C. Right apical mass in a patient referred for pathologic fracture of tibia . Open J Clin Med Case Rep. 2015; 1028

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