

Constrictive calcified pericarditis

Published on 27.05.2001

DOI: 10.1594/EURORAD/CASE.806

ISSN: 1563-4086

Section: Chest imaging

Case Type: Clinical Cases

Authors: Bucek RA, Langenberger H, Bloch BN, Partik B

Patient: 69 years, female

Clinical History:

Female 69-year old patient with a systolic heart murmur over the pulmonary valve.

Imaging Findings:

The patient was admitted for a change of the tip of her pacemaker, which was implanted because of bradycardia after ablation of an accessory conduction pathway in 1992. Family history revealed that the patient's mother had died in the age of 43 because of non-ischemic heart disease. Clinical examination showed a systolic heart murmur over the pulmonary heart valve. Pre-interventional chest x-ray shows calcifications following the contour of the heart on the bottom of the right ventricle in the postero-anterior view and retrosternal in the lateral view. Echocardiography showed an enlarged left atrium and a thickened, partially calcified pericardium.

Discussion:

These imaging findings are typical for a calcified pericarditis, a clinical entity today mainly of idiopathic origin. Other causes are tuberculosis, viral infection, collagenosis, uremia, neoplasms and secondary to previous closed chest trauma, heart surgery and radiation therapy of the mediastinum. Scary adhesions of the pericardium and additional calcifications disturb diastolic relaxation as well as systolic contraction of the right heart and therefore cause elevated mean right-atrial and pulmonary wedge pressures. Possible symptoms include dyspnea, chest pain, fatigue and peripheral edema. Diagnosis is usually based on the finding of calcifications of the pericardium in chest x-ray or computed tomography (approximately one third to one-half of cases demonstrate calcifications), hemodynamical relevance is then evaluated by echocardiography. The characteristic site of pericardial calcifications is over the right-sided cardiac chambers and in the atrioventricular grooves. A calcified former left ventricular aneurysm is the only radiological differential diagnosis, mainly presenting with calcifications in the apex of the left ventricle. Oral steroids have been reported to improve the clinical situation but the definitive form of therapy is pericardial stripping.

Differential Diagnosis List: Constrictive calcified pericarditis

Final Diagnosis: Constrictive calcified pericarditis

References:

MacGregor JH, Chen JT, Chiles C, Kier R, Godwin JD, Ravin CE.

The radiographic distinction between pericardial and myocardial calcifications.

AJR Am J Roentgenol 1987;148:675-7. (PMID: [3493647](#))

Cimino JJ, Kogan AD.

Constrictive pericarditis after cardiac surgery: report of three cases and review of the literature.

Am Heart J 1989;118:1292-301. (PMID: [2686382](#))

Sugita T, Ueda Y, Ogino H, Morioka K, Sakakibara Y, Matsubayashi K, Nomoto T. Constrictive pericarditis caused by an old hematoma.

Thorac Cardiovasc Surg 1997;45:250-2. (PMID: [9402668](#))

Maisch B

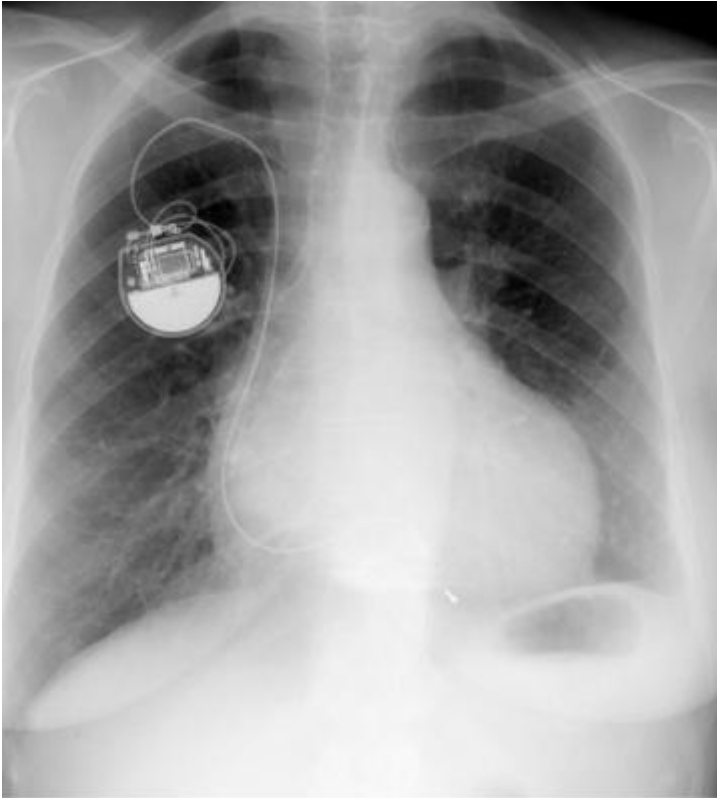
Entzündliche Herzerkrankungen (Endokarditis, Myokarditis und Kardiomyopathien). In: Innere Medizin. Hrsg von Classen M, Diehl V, Kochsiek K. 3. neubearbeitete Auflage.

Urban & Schwarzenberg. Wien (1994).

Slone RM. Thoracic imaging. A practical approach. McGraw-Hill (1999).

Figure 1

a



Description: Pre-interventional chest x-ray shows calcifications following the contour of the heart over the bottom of the right ventricle. Typical projection of an unipolar pacemaker with its tip in the right ventricle (postero-anterior view). **Origin:**

b



Description: Calcifications over the bottom of the right ventricle and the anterior wall (retrosternal).
Note: additional calcification of the mitral annulus (lateral view). **Origin:**