

Pericardial Constriction and Left Ventricular Dysfunction in a Breast Cancer Survivor – Late Cardiotoxicity of Radiotherapy or 5-FU Case Report

Berhil Taha^{*}, El Boussaadani Badre, Ech-Chenbouli Amine, Raissouni Zainab

Cardiology Department, University of Abdelmalek Saadi, Tangier, Morocco

Email address:

berhil.taha@gmail.com (Berhil Taha)

^{*}Corresponding author

Abstract

Background: rdioxicity from oncologic treatments, including radiotherapy and fluoropyrimidine-based chemotherapy, can manifest years later, leading to pericardial constriction and left ventricular dysfunction in cancer survivors. ase
Presentation: 53-year-old breast cancer survivor, treated with surgery, radiotherapy (>25 Gy), and 5-FU chemotherapy in 2015, remained cancer-free until a pleural recurrence in 2024, managed with pleurodesis and capecitabine. Six months later, she developed cardiac tamponade requiring pericardial drainage. Transthoracic echocardiography showed a preserved LVEF (60%), and concurrent subclavian vein thrombosis led to anticoagulation. By early 2025, she developed exertional dyspnea (NYHA III) with left ventricular dysfunction (LVEF 45%) Echocardiography reveals multiple findings suggestive of chronic constrictive pericarditis (CCP), including septal bounce (fig1), pericardial thickening, respiratory variation in mitral and tricuspid inflows (fig 2), and diastolic reversal of the D-wave in the hepatic vein flow. Coronary disease was excluded. Cardiac MRI revealed evolving constrictive pericarditis (fig 3), moderate dysfunction (GLS -13.5%), biatrial enlargement, and bilateral pleural effusion. Right heart catheterization confirmed adiasstole with a deep plateau pattern. The patient was treated with diuretics, direct oral anticoagulants (DOACs) and optimal heart failure therapy. Pericardectomy was proposed, but the patient refused the surgery. Conclusion: is case highlights a rare late-onset pericardial constriction and ventricular dysfunction in a breast cancer survivor, potentially linked to prior oncologic treatments. These findings underscore the importance of long-term cardiovascular monitoring in cancer survivors.

Keywords

Cardiotoxicity, Constrictive Pericarditis, Left Ventricular Dysfunction, Radiotherapy-Induced Cardiac Injury, 5-FU Chemotherapy, Long-term Cardiovascular Monitoring