Title: Electromechanical dissociation of atria after cardioversion- Clinical case and management considerations

Introduction

Electromechanical dissociation (EMD) of atria is a noteworthy complication that occurs following direct current cardioversion for atrial fibrillation (AF), wherein atria do not contract effectively despite successful restoration of normal sinus rhythm. The duration of EMD of atria post cardioversion depends on the duration of AF.

Case description

A 74-year-old male with history of prostate cancer status post radiotherapy presented with dyspnea on exertion. Two weeks earlier, he had undergone a successful elective direct current cardioversion for persistent AF.The patient was incidentally diagnosed with atrial fibrillation about 9 months back; anticoagulation and cardioversion were held at that time given higher bleeding risk during radiotherapy for prostate cancer and a low CHA2DS2-VASc score of 1**.** Laboratory analysis showed brain natriuretic peptide 680 pg/mL and normal troponin. Electrocardiogram and chest Xray were normal. Echocardiogram showed normal left ventricular systolic function but an absence of mitral A-wave despite sinus rhythm indicating EMD of atria. The patient was managed with diuretics which improved his symptoms and a close follow up was recommended to assess the resolution of EMD of atria to determine the duration of anticoagulation.

Discussion

This case emphasizes the importance of recognizing EMD of atria post cardioversion. Close monitoring for its resolution is necessary in order to guide decisions regarding anticoagulation especially in patients with a CHA2DS2-VASc score of 1 or less, as EMD may serve as a substrate for thromboembolism due to atrial stasis.