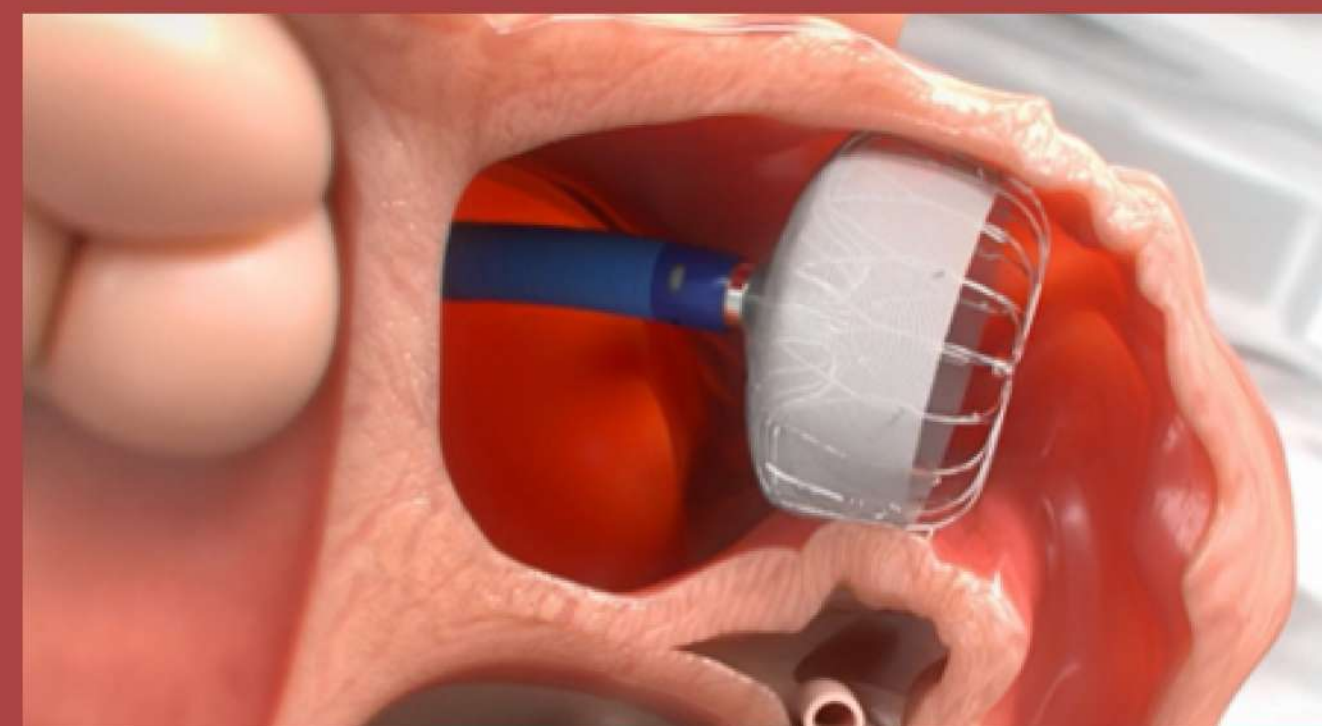


Watch out!

for this Watchman Device Complication

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Watchman FLX left atrial appendage closure device

Introduction

Hemorrhagic pericardial effusion is a relatively common and potentially deadly complication of Watchman device placement that physicians should know about as Watchman devices become more frequently used for management of embolic risk in patients with atrial fibrillation.

Case Presentation

- 79-year-old male with a history of paroxysmal atrial fibrillation, chronic myelomonocytic leukemia (CMML), and hypertension presented to the Emergency Room with severe orthopnea, dyspnea on exertion, and low-grade fever.
- 3 days earlier underwent atrial fibrillation ablation and left atrial appendage occlusion with a Watchman FLX device.
- Initially treated for an acute heart failure with preserved ejection fraction exacerbation and community acquired pneumonia.
- Developed recurrent atrial fibrillation with rapid ventricular response; echocardiogram with small pericardial effusion and preserved EF. Amiodarone begun; cardioversion failed.
- Day 6-7: Worsening dyspnea and hypervolemia with new lactic acidosis, acute kidney injury, and shock liver.
- Echocardiogram showed large pericardial effusion with tamponade physiology requiring urgent pericardiocentesis.
- Patient recovered and was discharged a few days later.

Imaging

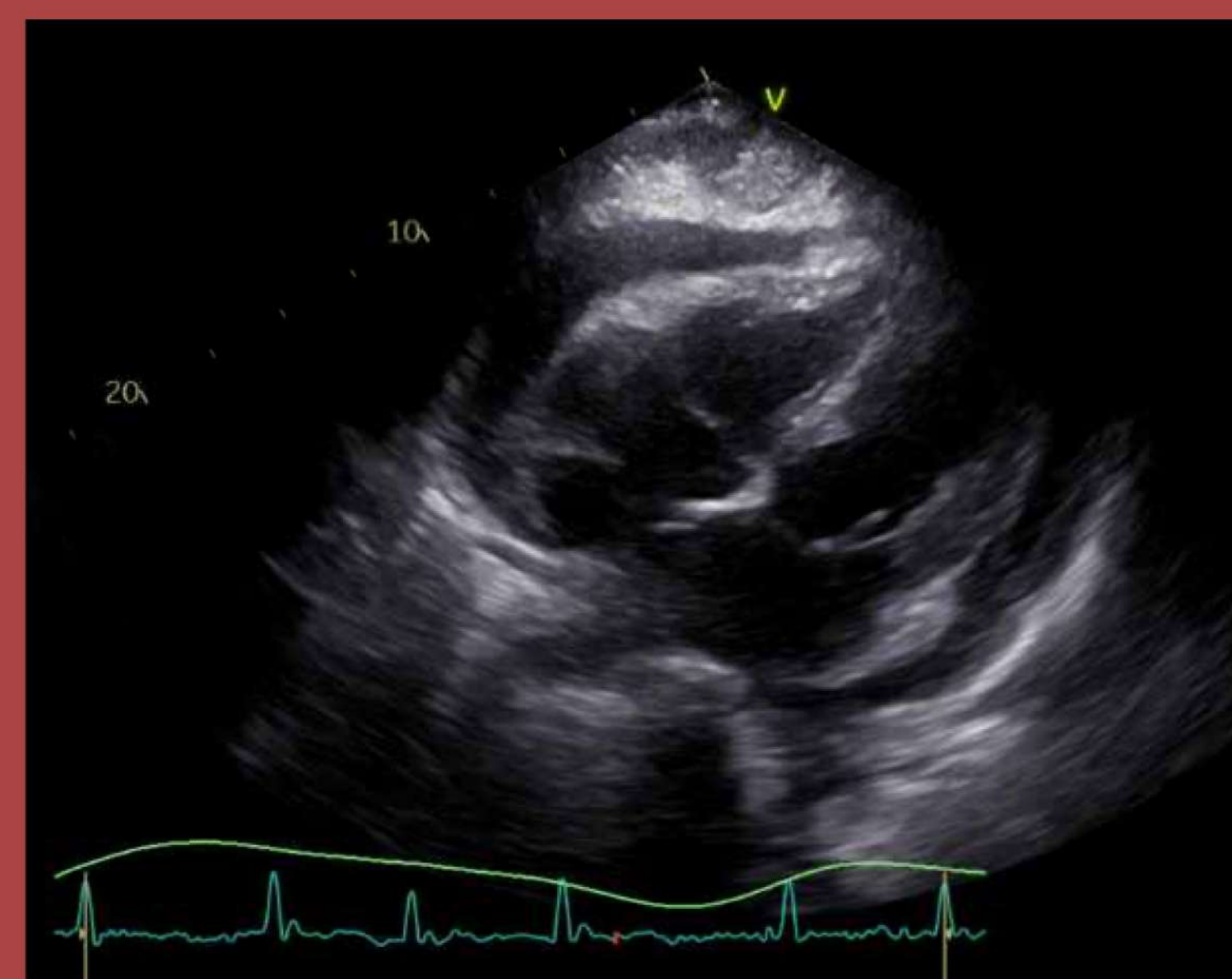
● **Day 0** Afib ablation & LAAO Watchman FLX device

● **Day 5** Transthoracic Echocardiogram



- Concentric LVH
- Normal LVEF without wall motion abnormalities
- Small pericardial effusion without diastolic filling impairment

● **Day 8** Transthoracic Echocardiogram



- Moderate - large circumferential pericardial effusion
- Low LV diastolic filling volume and reduced stroke volume with plethoric IVC, consistent with tamponade physiology

Discussion

- In clinical trials and real-world assessments of Watchman device safety, pericardial effusion remains the most common complication, with national registry studies reporting an incidence of 1.24 - 1.4%.
- Mechanisms for pericardial effusion include trans-septal puncture, manipulation of guide wires and catheters in the left atrial appendage, and deployment of the Watchman device.
- Delayed pericardial effusion (occurring greater than 7 days post-op) is rare, with an incidence of 0.2% in one study.
- Watchman FLX device is associated with significantly fewer pericardial effusions requiring intervention compared to the predicate Watchman device.
- Our patient had additional risk for pericardial effusion from his medical history of CMML, thrombocytopenia, oral anticoagulation use, and, potentially, concurrent ablation.
- Our patient's tamponade physiology was likely camouflaged by his rapid atrial fibrillation and robust peripheral vascular response, while use of amiodarone confounded the etiology of his acute liver injury.

“Cardiac POCUS revealed tamponade and expedited life-saving pericardial drainage in the case of a delayed post-Watchman device placement pericardial effusion.”



References



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