

IMAGE

The one that got away: A leadless pacemaker embolizes to the lungs



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The patient is a 74-year-old man with a history of persistent atrial fibrillation with symptomatic episodes of bradycardia and elected to proceed with placement of a single-chamber leadless pacemaker (Nanostim, St. Jude Medical, Inc., St. Paul, MN) as part of a clinical trial¹. The pacemaker was placed successfully, and the patient did well overnight. The next morning it was noted that pacemaker spikes were no longer noted on telemetry, and a posterior-anterior and lateral chest radiograph was taken ([Figure 1](#)). The leadless pacemaker had dislodged from the right ventricle and embolized to a tertiary branch of the right pulmonary artery. The patient was entirely asymptomatic from embolization, as there was no occlusion of the pulmonary artery ([Online Supplemental Figure 1](#)). Using a gooseneck snare, from the femoral venous approach, the pacemaker was retrieved quickly and without any other complications ([Online Supplemental Video 1](#)).

Leadless pacemakers have recently been approved by the Food and Drug Administration for patients with an indication for single-chamber, ventricular-only pacing.²

Pacemakers are inserted via a femoral venous approach, advanced through the inferior vena cava into the right atrium, across the tricuspid valve and are placed near the right ventricular apex. In comparison to a traditional pacemaker, the leadless device does not occlude the subclavian vein, has a significantly lower infection rate, is associated with improved cosmesis, and has a longer battery life. The most feared complication is dislodgment of the device. Even with a dislodgment, however, patients can be asymptomatic and the device can be quickly and safely retrieved.

Appendix

Supplementary data

Supplementary data are available in the online version of this article at <http://dx.doi.org/10.1016/j.hrthm.2016.09.006>

References

1. A safety and effectiveness trial for a leadless pacemaker system (the LEADLESS II Study). St. Jude Medical, St. Paul, MN. FDA.gov. Accessed Sept 28, 2016.
2. FDA.gov. Accessed September 28, 2016.

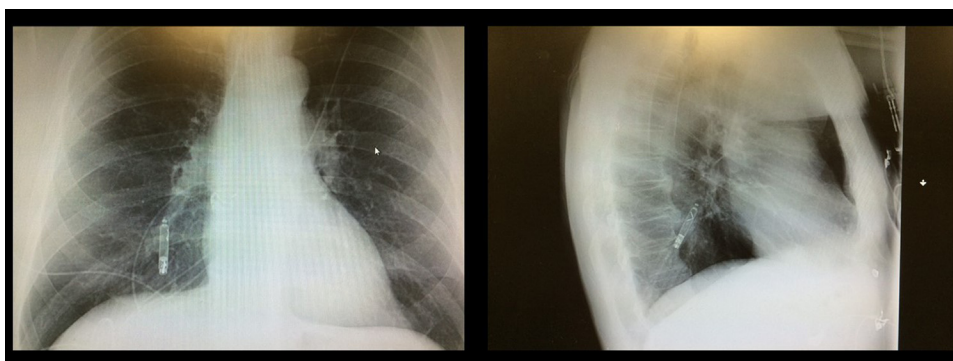


Figure 1.

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