

Intra-Aortic Migration of a Clipped Epicardial Pacing Wire

Omar Ray Kahaly, MD
Dilesh Patel, MD
Ralph S. Augostini, MD,
FACC
Gregory D. Rushing, MD
Mahmoud M. Housse,
MD

A 76-year-old man presented for electrophysiologic evaluation of a temporary pacemaker wire detected in his aorta. His medical history included coronary artery disease, 2-vessel coronary artery bypass grafting (CABG) 16 years previously, congestive heart failure (left ventricular ejection fraction, 0.35–0.40), hyperlipidemia, hypertension, frequent premature ventricular contractions, and single-chamber implantable cardioverter-defibrillator placement. His primary care physician had ordered chest computed tomograms to evaluate shortness of breath, chest pain, and hemoptysis. The images revealed mild infiltrative disease in the right upper lung lobe and a temporary pacemaker wire in the aortic arch. The proximal end of the wire terminated in the right ventricular wall, and the distal end was floating in the descending aorta (Fig. 1). Transesophageal echocardiograms (TEE) showed the wire in the lumen of the descending aorta (Fig. 2).

At the time of CABG, the patient's epicardial pacemaker wires had been clipped at skin level and left in place. From that time to the current presentation, he had experienced no stroke symptoms, nor had he undergone TEE or dedicated aortic scanning procedures until the current presentation. We concluded that the imaging findings were incidental. We then consulted our cardiac surgery colleagues regarding the high risks of percutaneous lead extraction, and they surmised that the epicardial lead had

Presented at the Ohio ACC
2017 Poster Competition;
Columbus, 14 October 2017.

Section Editor:
Raymond F. Stainback, MD

From: Division of Cardiovascular Medicine, Department of Internal Medicine (Drs. Augostini, Housse, Kahaly, and Patel), and Division of Cardiac Surgery, Department of Surgery (Dr. Rushing), The Ohio State University Wexner Medical Center, Columbus, Ohio 43210

Address for reprints:
Mahmoud Housse, MD,
Division of Cardiovascular
Medicine, The Ohio State
University Wexner Medical
Center, 2nd fl., 473 W. 12th
Ave., Columbus, OH 43210

E-mail:
mahmoud.housse@
osumc.edu

© 2020 by the Texas Heart®
Institute, Houston

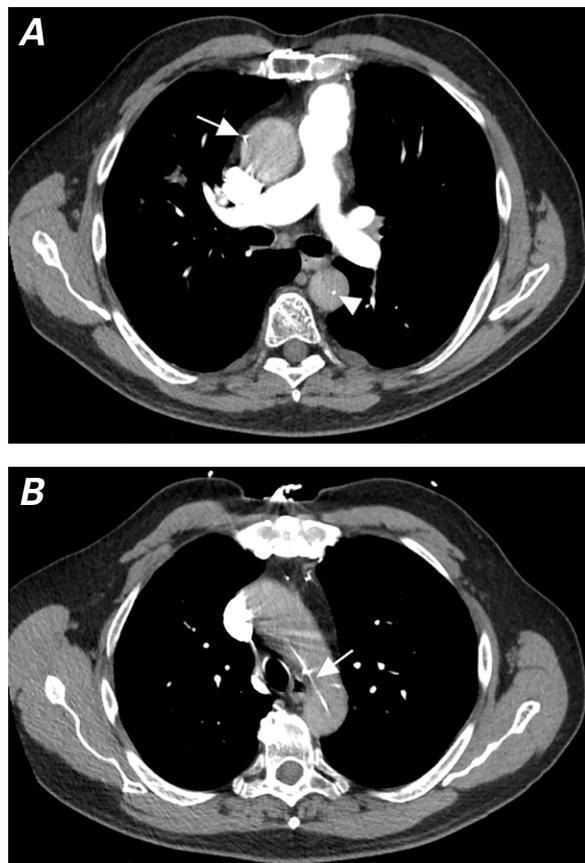


Fig. 1 Chest computed tomograms (axial mediastinal views) show **A**) the temporary epicardial pacing wire entering the ascending aorta above the right atrium (arrow) and the other end in the lumen of the descending aorta (arrowhead), as well as **B**) in the aortic arch (arrow).



Fig. 2 Transesophageal echocardiograms at **A)** 0° and **B)** 99° show the temporary epicardial pacing wire (arrows) in the lumen of the descending aorta.

migrated into the aorta. They recommended prescribing dual antiplatelet therapy and performing periodic outpatient follow-up.

Comment

Although rare, intra-aortic migration of an epicardial pacing wire can cause various complications, including stroke and endocarditis.^{1,2} The clipping of our patient's temporary pacing wire led to a substantial complication that perhaps has never been encountered. Removing these wires before CABG or other procedures may prevent such problems.

References

1. Wolf LG, Scaffa R, Maselli D, Weltert L, Nardella S, Di Roma M, et al. Intraaortic migration of an epicardial pacing wire: percutaneous extraction. *Ann Thorac Surg* 2013;96(1):e7-e8.
2. Dyal HK, Sehgal R. The catastrophic journey of a retained temporary epicardial pacemaker wire leading to *Enterococcus faecalis* endocarditis and subsequent stroke. *BMJ Case Rep* 2015;2015:bcr2014206215.