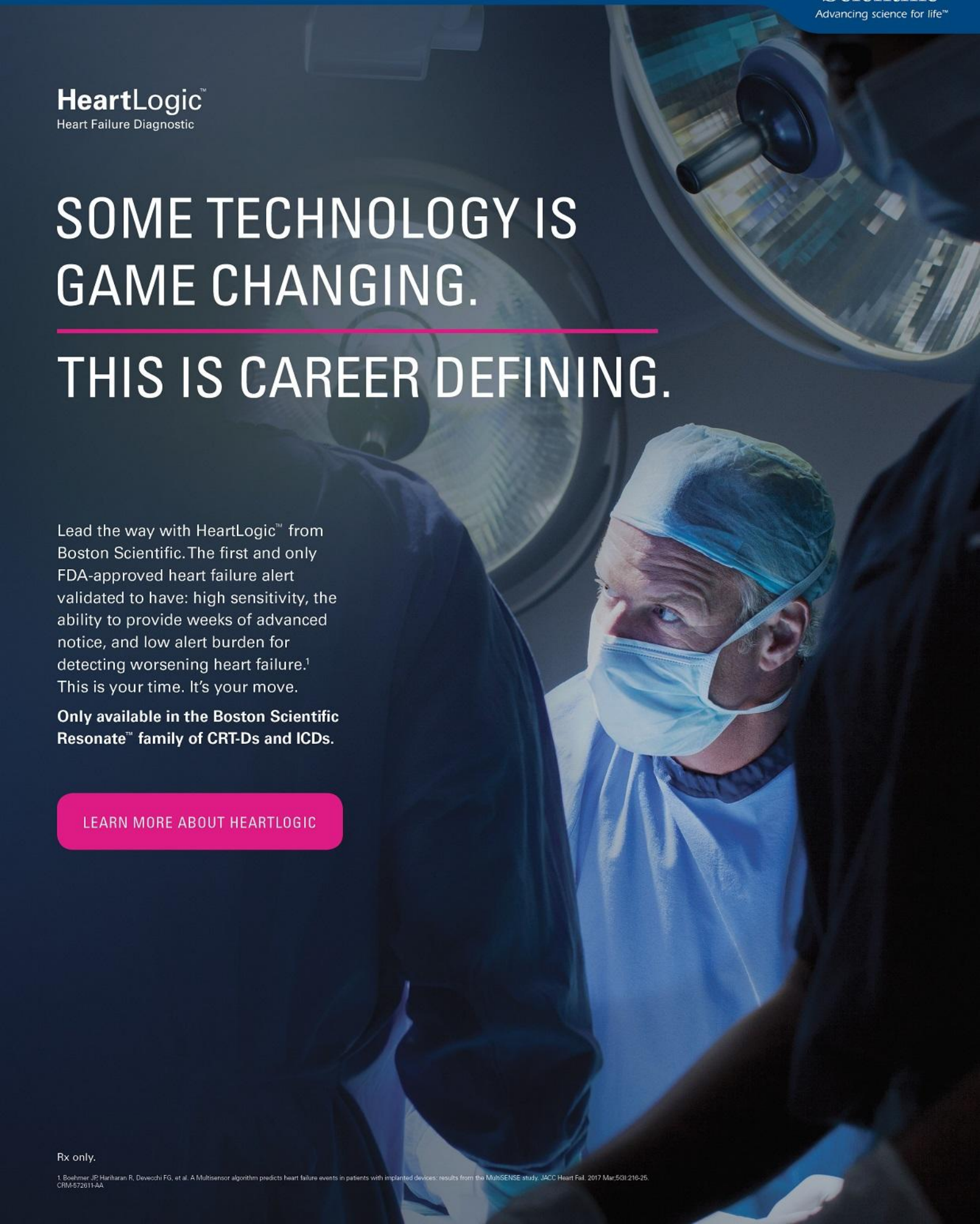
Boston Scientific
Advancing science for life™

HeartLogic™
Heart Failure Diagnostic

SOME TECHNOLOGY IS GAME CHANGING.

THIS IS CAREER DEFINING.



Lead the way with HeartLogic™ from Boston Scientific. The first and only FDA-approved heart failure alert validated to have: high sensitivity, the ability to provide weeks of advanced notice, and low alert burden for detecting worsening heart failure.[1] This is your time. It's your move.

Only available in the Boston Scientific Resonate™ family of CRT-Ds and ICDs.

LEARN MORE ABOUT HEARTLOGIC

Rx only.

1. Boehmer JP, Hariharan R, Devecchi FG, et al. A Multisensor algorithm predicts heart failure events in patients with implanted devices: results from the MultiSENSE study. JACC Heart Fail. 2017 Mar;5(3):216-25.
CRM-572611-AA

Received: 28 June 2019 | Revised: 4 August 2019 | Accepted: 5 August 2019

DOI: 10.1111/jce.14107

EP IMAGE

WILEY

Intracardiac echocardiography from the right ventricular outflow tract confirms an accessory pathway in the aortomitral continuity

Péter Kupó MD | László Sághy MD, PhD | Róbert Pap MD, PhD

Second Department of Internal Medicine and Cardiology Centre, Medical School, University of Szeged, Szeged, Hungary

Correspondence
Péter KUPÓ, MD, Second Department of Internal Medicine and Cardiology Centre, Medical School, University of Szeged, H-6725, Szeged, Semmelweis u. 8, Hungary.
Email: peter.kupo@gmail.com

Disclosures: None.

A 40-year-old man presented to our clinic with occasional short episodes of palpitations. Twelve-lead electrocardiogram showed sinus rhythm (SR) with preexcitation. The delta wave was positive in V2-V6, I, II, III, aVF and negative in augmented vector left (aVL) and augmented vector right (aVR). He was admitted for an invasive electrophysiological study. A decapolar catheter was advanced into the coronary sinus, as well as a quadripolar catheter and a 4 mm nonirrigated radiofrequency (RF) ablation catheter into the right ventricle (RV) and his position, respectively. Programmed ventricular stimulation was performed and concentric, nondecremental ventriculoatrial conduction was recorded. Programmed atrial stimulation-induced nonsustained orthodromic atrioventricular reentrant tachycardia. An intracardiac echocardiography (ICE) catheter (AcuNav, Siemens) was introduced into the right heart to guide mapping. During SR, mapping of the tricuspid annulus failed to identify any ventricular activation preceding the delta wave, thus transseptal puncture was performed. Surprisingly, in the course of the mapping procedure, the earliest ventricular activation was found at the left anteroseptal region. Imaging from the ICE catheter introduced into the right ventricular outflow tract (RVOT) clearly depicted the site to be at the aortomitral continuity (Figure 1 and Video). Conventional RF energy (temperature-controlled mode; 30 W; 1 minute) delivered at this site permanently eliminated accessory pathway (AP) conduction.

Once APs were thought to be nonexistent between the left and right fibrous trigones, where the left atrial myocardium is not in direct juxtaposition with the left ventricular myocardium, the region of the aortomitral continuity.[1] However, this assumption was challenged by two case reports, that described APs ablated in the left anteroseptal region using fluoroscopy only.[2,3] Our case with ICE imaging of the ablation site from the RVOT unequivocally demonstrates that an AP can exist where the aortic and mitral valves are in fibrous continuity.

CONFLICT OF INTERESTS

The authors declare that there are no conflict of interests.

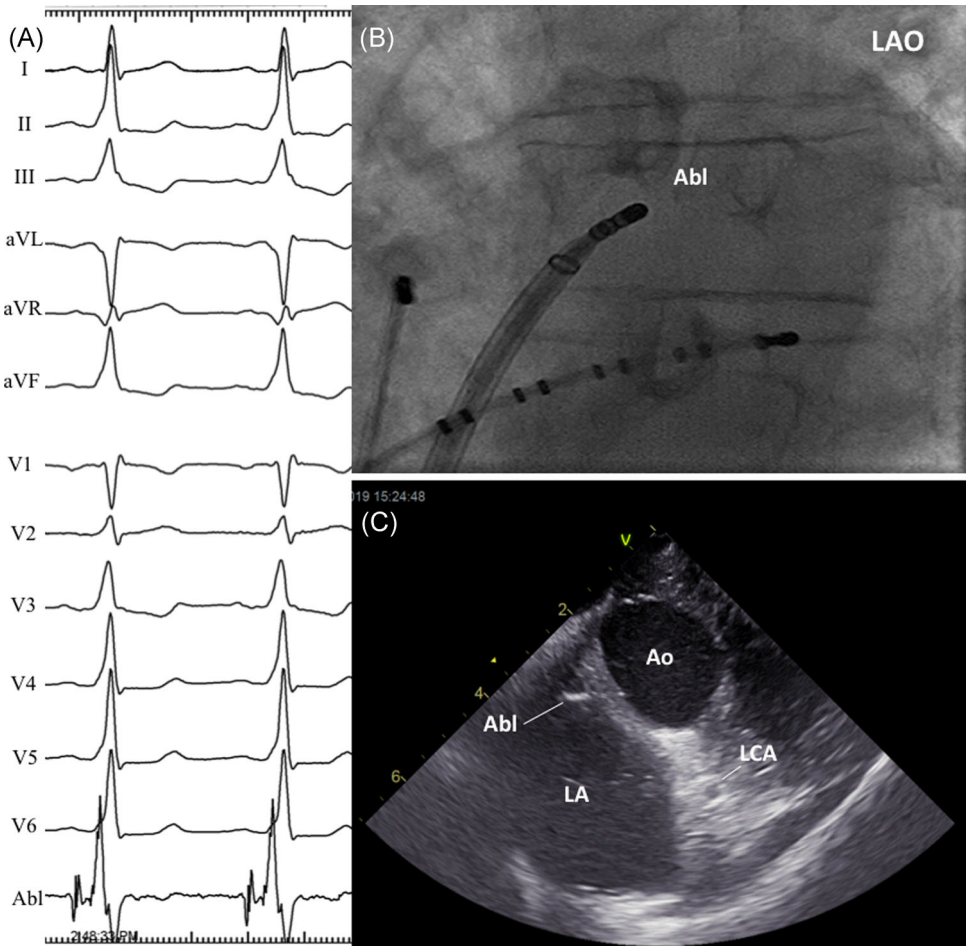


FIGURE 1 A, Preexcitation pattern on the twelve-lead surface electrocardiogram during sinus rhythm, and local electrogram recorded by the ablation catheter (Abl) at the successful site. B, Fluoroscopic image of the ablation catheter (Abl) at the successful ablation site in left anterior oblique (LAO) projection. C, Intracardiac echocardiography image shows the ablation catheter at the aortomitral continuity. Ao, aortic annulus; LA, left atrium; LCA, left coronary artery

ORCID

Péter Kupó http://orcid.org/0000-0002-9422-4245
Róbert Pap http://orcid.org/0000-0002-7009-5063

REFERENCES

1. DJ Callans, E Anter. Nonpharmacologic treatment of tachyarrhythmias. In: Antman EM, ed. *Cardiovascular Therapeutics: A Companion to Braunwald's Heart Disease*. 4th. Philadelphia, PA: Elsevier Saunders; 2012:383.
2. Liew R, Ward D. Two cases of accessory pathways located at the aortomitral continuity: clues from the 12-lead ECG where the algorithms have failed. *Heart Rhythm*. 2008;5(8):1206-1209.
3. Jastrzebski M. An unusual case of preexcitation: where is the accessory pathway? *J Cardiovasc Electrophysiol*. 2016;27(2):236-238.

SUPPORTING INFORMATION

Additional supporting information may be found online in the Supporting Information section.

How to cite this article: Kupó P, Sághy L, Pap R. Intracardiac echocardiography from the right ventricular outflow tract confirms an accessory pathway in the aortomitral continuity. *J Cardiovasc Electrophysiol*. 2019;1-2. https://doi.org/10.1111/jce.14107