Response to Letter Regarding Article, “Outcome of Apparently Unexplained Cardiac Arrest: Results From Investigation and Follow-Up of the Prospective Cardiac Arrest Survivors With Preserved Ejection Fraction Registry”

We would like to thank Professors Jáimez and Sánchez for their letter of response commenting on our recent summary of evaluation and outcome of our first 200 unexplained cardiac arrest probands. We would first like to point out that we excluded patients with a manifest diagnosis, so none of these patients had overt evidence of an ion channelopathy or cardiomyopathy that are typically both readily diagnosed and treated. This is reflected in our empirical strength of diagnosis framework, which is necessary when a classic diagnosis is not forthcoming. In addition, registries do not mandate care but rather capture it, and reflect the reality of practice with the vagaries of contextual clinical decision making.

In response to the concerns about the incidence of shocks and the inefficacy of medical therapy, it is important to point out the difference between efficacy and effectiveness. Without a doubt, a patient who is adherent to β-blockers for long QT syndrome has an extremely low risk of receiving a shock from their implantable cardioverter defibrillator (efficacy). In contrast, many patients do not adhere to recommended medical therapy, particularly when the patient is young and the diagnosis is not compelling (not effective). In our study, 3 of 18 patients diagnosed with long QT and 1 of 10 patients diagnosed with catecholaminergic polymorphic ventricular tachycardia received an appropriate shock. Several patients were on metoprolol before the recent evidence of inefficacy of metoprolol. All 4 patients had adjustment or initiation of medical management and have not received further shocks during follow-up. The β-blocker use in the undiagnosed patients reflects inclusion of weak evidence of disease patients, who may have had a single-prolonged QT interval or QTc prolongation in response to epinephrine, but no other evidence from exercise or genetic testing. These patients are often placed on empirical β-blockade.

A valid point is raised with regard to implantable cardioverter defibrillator programming, which again reflects an era of early intervention programming that has evolved in our study as it has in all practices. We did not capture these details and are embarking on data collection to compare the 2 programming eras once sufficient outcomes have been accumulated. Finally, we began a focus on enrolling more family members 3 years ago, and currently have an analysis under consideration that involves 200 unexplained cardiac arrest first-degree relatives. This is a clear priority to understand family implications and enrich gene discovery opportunities.

Disclosures

None.

Adam R.M. Herman, MSc
Christopher Cheung, MD
Division of Cardiology, Department of Medicine
University of British Columbia
Vancouver, BC, Canada

Brenda Gerull, MD
Division of Cardiology, Department of Medicine
Libin Cardiovascular Institute
University of Calgary
Calgary, AB, Canada

Christopher S. Simpson, MD
Division of Cardiology, Department of Medicine
Queen’s University
Kingston, ON, Canada

David H. Birnie, MB, ChB
Division of Cardiology, Department of Medicine
University of Ottawa Heart Institute
Ottawa, ON, Canada

George J. Klein, MD
Division of Cardiology, Department of Medicine
Western University
London, ON, Canada

Jean Champagne, MD
Division of Cardiology, Department of Medicine
Quebec Heart and Lung Institute
Quebec City, QC, Canada

Jeffrey S. Healey, MD
Division of Cardiology, Department of Medicine
Population Health Research Institute
Hamilton, ON, Canada

Karen Gibbs, RN
Division of Cardiology, Department of Medicine
University of British Columbia
Vancouver, BC, Canada

Mario Talajic, MD
Department of Medicine
Montreal Heart Institute, Université de Montréal
Montreal, QC, Canada

Martin Gardner, MD
Division of Cardiology, Department of Medicine
QEII Health Sciences Center
Halifax, NS, Canada

Matthew T. Bennett, MD
Christian Steinberg, MD
Mikyla Janzen, BScH
Division of Cardiology, Department of Medicine
University of British Columbia
Vancouver, BC, Canada

Michael H. Gollob, MD, BSc
Division of Cardiology, Department of Medicine
University Health Network
Toronto, ON, Canada

Paul Angaran, MD
Division of Cardiology, Department of Medicine
St. Michael’s Hospital
University of Toronto
Toronto, ON, Canada

Raymond Yee, MD
Division of Cardiology, Department of Medicine
Western University
London, ON, Canada
Richard Leather, MD  
Division of Cardiology, Department of Medicine  
Royal Jubilee Hospital  
Victoria, BC, Canada

Santabhanu Chakrabarti, MD  
Division of Cardiology, Department of Medicine  
University of British Columbia  
Vancouver, BC, Canada

Shubhayan Sanatani, MD  
Division of Cardiology, Department of Medicine  
BC Children’s Hospital  
Vancouver, BC, Canada

Vijay S. Chauhan, MD  
Division of Cardiology, Department of Medicine  
University Health Network  
Toronto, ON, Canada

Andrew D. Krahn, MD  
Division of Cardiology, Department of Medicine  
University of British Columbia  
Vancouver, BC, Canada

References


Response to Letter Regarding Article, "Outcome of Apparently Unexplained Cardiac Arrest: Results From Investigation and Follow-Up of the Prospective Cardiac Arrest Survivors With Preserved Ejection Fraction Registry"

Adam R.M. Herman, Christopher Cheung, Brenda Gerull, Christopher S. Simpson, David H. Birnie, George J. Klein, Jean Champagne, Jeffrey S. Healey, Karen Gibbs, Mario Talajic, Martin Gardner, Matthew T. Bennett, Christian Steinberg, Mikyla Janzen, Michael H. Gollob, Paul Angaran, Raymond Yee, Richard Leather, Santabhanu Chakrabarti, Shubhayan Sanatani, Vijay S. Chauhan and Andrew D. Krahn

_Circ Arrhythm Electrophysiol._ 2016;9:
doi: 10.1161/CIRCEP.116.004012

_Circulation: Arrhythmia and Electrophysiology_ is published by the American Heart Association, 7272 Greenville Avenue, Dallas, TX 75231
Copyright © 2016 American Heart Association, Inc. All rights reserved.
Print ISSN: 1941-3149. Online ISSN: 1941-3084

The online version of this article, along with updated information and services, is located on the World Wide Web at:
http://circep.ahajournals.org/content/9/4/e004012

Permissions: Requests for permissions to reproduce figures, tables, or portions of articles originally published in _Circulation: Arrhythmia and Electrophysiology_ can be obtained via RightsLink, a service of the Copyright Clearance Center, not the Editorial Office. Once the online version of the published article for which permission is being requested is located, click Request Permissions in the middle column of the Web page under Services. Further information about this process is available in the Permissions and Rights Question and Answer document.

Reprints: Information about reprints can be found online at:
http://www.lww.com/reprints

Subscriptions: Information about subscribing to _Circulation: Arrhythmia and Electrophysiology_ is online at:
http://circep.ahajournals.org/subscriptions/