UC San Diego

UC San Diego Previously Published Works

Title

Letter by Daniels and Burns Regarding Article, "Incidence, Cause, and Comparative Frequency of Sudden Cardiac Death in National Collegiate Athletic Association Athletes: A Decade in Review".

Permalink

<https://escholarship.org/uc/item/7dz253c9>

Journal

Circulation, 133(12)

ISSN

0009-7322

Authors

Daniels, Lori B
Burns, Jane C

Publication Date

2016-03-01

DOI

10.1161/circulationaha.115.018908

Peer reviewed

Letter by Daniels et al Regarding Article, "Incidence, Causes, and Survival Trends From Cardiovascular-Related Sudden Cardiac Arrest in Children and Young Adults 0 to 35 Years of Age"

Lori B. Daniels, John B. Gordon and Jane C. Burns

Circulation. 2013;128:e390

doi: 10.1161/CIRCULATIONAHA.112.149757

Circulation is published by the American Heart Association, 7272 Greenville Avenue, Dallas, TX 75231

Copyright © 2013 American Heart Association, Inc. All rights reserved.

Print ISSN: 0009-7322. Online ISSN: 1524-4539

The online version of this article, along with updated information and services, is located on the World Wide Web at:

<http://circ.ahajournals.org/content/128/19/e390>

Permissions: Requests for permissions to reproduce figures, tables, or portions of articles originally published in *Circulation* 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* is online at:
<http://circ.ahajournals.org/subscriptions/>

Correspondence

Letter by Daniels et al Regarding Article, “Incidence, Causes, and Survival Trends From Cardiovascular-Related Sudden Cardiac Arrest in Children and Young Adults 0 to 35 Years of Age”

To the Editor:

We read with interest the article by Meyer et al¹ describing the incidence, causes, and survival trends from cardiovascular-related sudden cardiac arrest among children and young adults younger than 35 years of age. We were surprised to note that over this 30-year period, no cardiac arrests attributed to missed Kawasaki disease were identified. Kawasaki disease, the most common cause of acquired heart disease in US children, is an acute febrile illness that can be difficult to diagnose. Coronary artery aneurysms form in 25% of untreated and 5% of treated children. Sudden cardiac arrest can be the presenting symptom of missed Kawasaki disease, attributable to acute thrombosis in coronary aneurysms or to sudden ventricular arrhythmia.² We have previously shown that ≈5% of young adults undergoing coronary angiography for suspected cardiac ischemia have coronary artery aneurysms consistent with a history of Kawasaki disease.³ It is therefore surprising to us that no cases of Kawasaki disease were identified over a 30-year period. We wonder whether some of the 47 cases that Meyer et al¹ classified as “cardiac unspecified” or as “other” (including the 1 case described as “coronary arteritis”) could be attributable to the cardiovascular sequelae of Kawasaki disease. Additionally, we wonder whether some of the cases categorized as “coronary artery disease” could have been misclassified. Although the pathology of coronary lesions in patients with a history of Kawasaki disease is very different from the pathology of typical coronary atherosclerosis, the 2 may be difficult to distinguish retrospectively via chart review.

As more children with a history of Kawasaki disease reach young adulthood, we believe that the incidence of sudden cardiac arrest

caused by the cardiovascular sequelae of Kawasaki disease is likely to increase. We suspect that the true incidence of sudden cardiac arrest caused by sequelae of Kawasaki disease remains underdiagnosed.

Disclosures

None.

Lori B. Daniels, MD, MAS

Division of Cardiology
Department of Medicine
University of California, San Diego
La Jolla, CA

John B. Gordon, MD

Sharp Memorial Hospital and San Diego Cardiac Center
San Diego, CA

Jane C. Burns, MD

Department of Pediatrics
University of California, San Diego
La Jolla, CA

References

1. Meyer L, Stubbs B, Fahrenbruch C, Maeda C, Harmon K, Eisenberg M, Drezner J. Incidence, causes, and survival trends from cardiovascular-related sudden cardiac arrest in children and young adults 0 to 35 years of age: a 30-year review. *Circulation*. 2012;126:1363–1372.
2. Burns JC, Shike H, Gordon JB, Malhotra A, Schoenwetter M, Kawasaki T. Sequelae of Kawasaki disease in adolescents and young adults. *J Am Coll Cardiol*. 1996;28:253–257.
3. Daniels LB, Tjajadi MS, Walford HH, Jimenez-Fernandez S, Trofimenko V, Fick DB Jr, Phan HA, Linz PE, Nayak K, Kahn AM, Burns JC, Gordon JB. Prevalence of Kawasaki disease in young adults with suspected myocardial ischemia. *Circulation*. 2012;125:2447–2453.