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Title

Takotsubo syndrome: a call to action.

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Journal

Catheterization and cardiovascular interventions : official journal of the Society for Cardiac Angiography & Interventions, 82(6)

ISSN

1522-1946

Author

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Publication Date

2013-11-01

DOI

10.1002/ccd.25214

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Editorial Comment

Takotsubo Syndrome: a Call to Action

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In this issue of CCI, Angulo-Llanos and coworkers describe an unusual presentation of Takotsubo Cardiomyopathy in a 71-year old woman who developed an apparent embolus to the mid right coronary artery (RCA) 12 h after presentation. They speculate that a thrombus embolized from the apical akinetic left ventricle to the RCA. There is some uncertainty because the patient also developed atrial fibrillation for 10 h before the infarction occurred. I chose to write an editorial about this case because I wanted to highlight the condition of Takotsubo cardiomyopathy and discuss how the interventional cardiology community might work together to shed some light on the etiology and pathophysiology of this poorly understood problem.

We have all seen sporadic cases of Takotsubo Syndrome, but very few people have acquired a large series to make any definitive statements. It is time that interventional cardiologists begin to spend more time to try and figure out why this happens and how best to treat it. Paolo Angelini at the Texas Heart Institute has an interesting hypothesis that Takotsubo Syndrome is caused by intense vasospasm of all of the major epicardial coronary vessels. He has a series of 35 patients with angiograms before and after infusion of acetylcholine to demonstrate spasm in the coronaries. If all three vessels are involved, one sees the typical pattern of apical ballooning. Other patterns of LV dysfunction are associated with other distributions of coronary spasm. The endothelial dysfunction is transient and is only present for about 2 weeks. We do not know if this pattern is present in all or most cases of Takotsubo Syndrome, and it is not known what the trigger of this intense spasm may be. Emotional stress is present in many of the patients, but not all. It is often stated that catecholamine levels are high in these patients, but there is documentation of this statement in only one case report. In fact, the inotropic support used in this patient, may have exacerbated her coronary spasm and could have precipitated the development of in situ thrombus in the RCA, so it may not have been due to an embolus from the LV or the Left atrium. Jeffrey

Schussler from Baylor University, one of this year's society of cardiac angiography and interventions (SCAI) emerging leaders and mentors (ELM) program recipients, is actively involved in generating a registry of these patients and the variety of his observations are quite unusual.

In association with Dr. Angelini and Dr. Schussler, we are trying to develop a web based system that will act as a repository and registry for Takotsubo Syndrome cases from all over the world. We are asking for clinicians to participate in this nonfunded registry so that we may learn more about Takotsubo Syndrome and eventually develop more sound recommendations for how best to treat it. For those of you who are interested in helping out with this project, please contact Dr. Angelini, Dr. Schussler, or myself at the email addresses below. We can send you a copy of the protocol and consent form for you to use as a template for your investigational review board (IRB). For those of you who may not be able to participate with the acetylcholine infusions, you can still participate in the registry with Dr. Schussler by contacting him at the email address below.

ACKNOWLEDGMENT

The author acknowledges Paolo Angelini, MD (Texas Heart Institute, Cardiology; pangelini@leachmancardiology.com) and Jeffrey Schussler, MD (Baylor University, Cardiology; Jeffrey.Schussler@baylorhealth.edu).

Conflict of interest: Nothing to report.

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Received 13 September 2013; Revision accepted 14 September 2013

DOI: 10.1002/ccd.25214

Published online 5 November 2013 in Wiley Online Library (wileyonlinelibrary.com)