Author's response to reviews

Title: Emotional Stress as a Trigger of Myasthenic Crisis and Concomitant Takotsubo Cardiomyopathy: a Case Report

Authors:

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Author's response to reviews: see over
Dr. Shaheen Lakhan  
The JMCR Editorial Team,  

June 13, 2010  

Dear Dr. Lakhan,

Enclosed you will find the revised manuscript entitled ‘Emotional Stress as a Trigger of Myasthenic Crisis and Concomitant Takotsubo Cardiomyopathy: a Case Report ’ (MS# 1891040462363799) co-authored with Drs. JingTian Wang, Ali Farvid and Reed L Levine and the responses to your letter of June 10th. Please be aware that the rank of each author was adjusted based on the weight of their contributions to this manuscript.

I read carefully over the two reviewers’ suggestions and criticisms and responded to all of them. In the following you will find revisions according to their suggestions in the text of the manuscript and statements regarding their comments in my letter. We are very grateful for the helpful remarks from the two reviewers.

Thank you for provisionally accepting this manuscript for publication in JMCR.

Yours sincerely,

Said R. Beydoun, M.D., FAAN  
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Reviewer 1’s Comments:

1. Please note the accurate criterion or guidelines for the diagnosis of TC for the reader to have great knowledge, and please read the following literature about guidelines in Japanese society of Cardiology.


   The text has been revised taking the above suggestions into account (please see page 7). The reference above has been cited in the manuscript (please see page 11).

2. Please clarify the difference of pathophysiology between your case and two reported cases in previous reports, and if you have labolatory data of catecholamine or hormonal examinations, describe them.

   The text has been revised to take this comment into account (please see page 7). Takotsubo cardiomyopathy (TC) in two previous reports was provoked by hemodynamic stress due to plasmapheresis and humoral immune response to MG crisis. TC in our case was triggered by emotional stress. Despite different clinical presentations, the three case reports may share the same patho-physiological mechanisms involving the hypothalamic-pituitary-adrenal axis and catecholamine system. Unfortunately, the levels of catecholamine or hormones were not measured in our present case report, which will guide future research.

Minor points

1. page5(including title page), line3.
   Please spell out the abbreviations ‘CMAP’

   ‘CMAP’ has been changed to ‘compound muscle action potential’ in the text (please see page 5)

2. In reference 1.and 2.
   Correct the font of authors name and literature to fit as a whole.

   This has been corrected (please see page 11)

3. In Fig.2
   Please clarify which picture of ventriculogram indicates the systolic or diastolic phase.

   Figure 2 has been revised taking this comment into account. The phase of the ventriculogram has been clarified in the caption (please see page 13).
Reviewer 2’s Comments:

The authors report a coincidence of two rare events - a myasthenia gravis crisis in combination with Takotsubo cardiomyopathy. However, neither the co-existence of the two diseases is new (Arai et al. 2004 A case of transient left ventricular ballooning ("Takotsubo"-shaped cardiomyopathy) developed during plasmapheresis for treatment of myasthenic crisis) nor the fact that emotional stress can precipitate both events. The case report does therefore not shed new light on either disease. I do not recommend publication.

I do not agree with this reviewer’s comment that our case report was the same as two previous cases and our report does not shed new light on either disease.

Firstly, the previous two published reports had different clinical presentations from ours. As illustrated in the discussion section in the paper, both patients in previous reports were initially admitted for myasthenia gravis (MG) crisis and developed Takotsubo cardiomyopathy (TC) only after receiving plasmapheresis treatments. Instead, our patient first presented with takotsubo cardiomyopathy after a significant emotional stress and developed myasthenia gravis crisis later on, especially shortly after the cardiac catheterization. The argument proposed in the previous reports that MG crisis itself and/or plasmapheresis treatments played a causative role in the development of TC is apparently challenged by the occurrence of TC prior to MG crisis in our report.

Secondly, it is true that there have been accumulating data reporting the association of emotional stress with either MG crisis or TC. However, to our knowledge, there has not yet been a published report addressing the co-occurrence of MG crisis and TC triggered by a severe emotional stress. Undoubtedly, our case report sheds further light on the pathophysiological mechanisms underlying the MG crisis and TC.

In addition, the implication of our case report is that it raises the awareness of this rarely reported coincidence of two uncommon events and facilitates the estimates of its true incidence.