Reviewer’s report

Title: Quantitative Motor Assessment of Muscular Weakness in Myasthenia Gravis: A pilot study

Version: 0 Date: 06 Oct 2015

Reviewer: Kimiaki Utsugisawa

Reviewer's report:

The authors reported the Q-Motor test for Q-GFA and Q-IMA using a grip instrument with a force-torque sensor as potentially useful quantitative measures for muscular symptoms in MG. PI and OI were higher in MG patients compared to healthy controls, although there was no difference in isometric grip force between the two groups. PI and OI correlated significantly with total QMG. And, the authors concluded that the Q-Motor test might be useful tools to quantitatively assess muscular weakness and early deficits in motor coordination in MG. At the same time, they appear to be aware of several limitations of this paper.

The reviewer feels that this is a potentially interesting paper, but which raises a few questions as follows:

Does abnormal value of Q-IMA without decrease in grip force reflect the easy fatigability in upper extremities and/or hand grip of each MG patient? If so, did PI and OI correlate more significantly with items for arm-outstretch time and/or hand grip in QMG compared with total QMG. What are "deficits in motor coordination in MG"? The reviewer feels that it would be better to comment on what Q-IMA reflect in MG patients with various distributions of symptoms. Is there no difference in PI and OI between ocular and generalized MG?

The authors commented that Q-Motor assessments are easily applicable methods, so I want to know how much time does Q-Motor assessments require.

Are the methods appropriate and well described?

If not, please specify what is required in your comments to the authors.

Yes
Does the work include the necessary controls?
If not, please specify which controls are required in your comments to the authors.
Yes

Are the conclusions drawn adequately supported by the data shown?
If not, please explain in your comments to the authors.
Yes

Are you able to assess any statistics in the manuscript or would you recommend an additional statistical review?
If an additional statistical review is recommended, please specify what aspects require further assessment in your comments to the editors.
I am able to assess the statistics

Quality of written English
Please indicate the quality of language in the manuscript:
Acceptable

Declaration of competing interests
Please complete a declaration of competing interests, considering the following questions:

1. Have you in the past five years received reimbursements, fees, funding, or salary from an organisation that may in any way gain or lose financially from the publication of this manuscript, either now or in the future?

2. Do you hold any stocks or shares in an organisation that may in any way gain or lose financially from the publication of this manuscript, either now or in the future?

3. Do you hold or are you currently applying for any patents relating to the content of the manuscript?

4. Have you received reimbursements, fees, funding, or salary from an organization that holds or has applied for patents relating to the content of the manuscript?

5. Do you have any other financial competing interests?

6. Do you have any non-financial competing interests in relation to this paper?
If you can answer no to all of the above, write 'I declare that I have no competing interests' below. If your reply is yes to any, please give details below.

I declare that I have no competing interests.

I agree to the open peer review policy of the journal. I understand that my name will be included on my report to the authors and, if the manuscript is accepted for publication, my named report including any attachments I upload will be posted on the website along with the authors' responses. I agree for my report to be made available under an Open Access Creative Commons CC-BY license (http://creativecommons.org/licenses/by/4.0/). I understand that any comments which I do not wish to be included in my named report can be included as confidential comments to the editors, which will not be published.

I agree to the open peer review policy of the journal.