

January 25, 2015

Dear Editor,

Please find enclosed the edited manuscript in Word format (file name: Review article 4.doc).

**Title:** Tongue dysfunction in neurological and neuromuscular disorders: a narrative literature review

**Author:** Umemoto G

**Name of Journal:** *World Journal of Otorhinolaryngology*

**ESPS Manuscript NO:** 14332

The manuscript has been improved according to the suggestions of reviewers: next pages

Thank you again for considering my manuscript in the *World Journal of Otorhinolaryngology*.

Sincerely yours,

Regards,

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The authors provide an overview of studies on tongue properties in neuromuscular disorders and beyond. They show own data from previously published observations. The manuscript is interesting and of relevance for the readership of this Journal. Some criticism should be addressed:

1. It should be corrected that an indication for an oral feeding tube should not merely depend on outcomes of the VF or tongue pressure assessment. Rather, the clinical symptoms of dysphagia should be taken into account and the use of an appropriate scale should be suggested for clinical practice, e.g. the Sydney swallowing questionnaire, the quality of life scale or the MD Anderson dysphagia inventory.

#### Response 1

I referred the suggestion that an indication for an oral feeding tube should not merely depend on outcomes of the VF or tongue pressure assessment in the paragraph in front of Discussion. Furthermore, I added a description about some scales for clinical practice, the Sydney swallowing questionnaire and the MD Anderson dysphagia inventory which have difficulty in objective and quantitative evaluation, in Introduction.

2. A large portion of the manuscript is on Parkinson's disease (e.g. pages 5-7), but this is not a neuromuscular disorder. Stroke and other neurological conditions are also reviewed. This should be clarified and the abstract and title should reflect this, e.g. by discussing "neuromuscular and other neurological disorders".

#### Response 2

I replaced the term "neuromuscular disorders (NMD)" with "neuromuscular and other neurological disorders (NNMD)". I also added a supplementary explanation about using key words, neuromuscular disorders and parkinsonian syndromes, to search reference literatures.

3. Page 7, data by Higo et al. on VF assessment: More details of differential findings in MG, ALS, MSA etc. should be mentioned.

#### Response 3

I added detailed information about differential findings in MG, ALS, and MSA from studies of Higo et al. In patients with MG, a significant correlation between disturbance of laryngeal elevation and aspiration was found. Most of ALS patients maintained

normal upper esophageal sphincter relaxation, but some patients showed upper esophageal sphincter spasm. Patients in the early stage of MSA-C showed disturbance in bolus transportation from the oral cavity to the pharynx which will be caused by progression of cerebellar dysfunction and overlapped parkinsonism.

4. Figures 1 to 3: the number of patients should be mentioned for each piece of data. The original publication of each of these figures should be mentioned and it should be mentioned if a permission for reproduction was needed.

#### Response 4

I added the number of study patients in Figures 1 to 3. I also mentioned that these figures were reproduced from my previous studies. Therefore, permissions for the reproduction were thought to be unnecessary.

### General comments

The subject under review is relevant and the ultimate aim of achieving intubation guidelines for dysphagia patients with neuromuscular disorders is clinically interesting. However, the amount of discussion/conclusion and description on how to achieve this aim is very sparse. The review as such is well written and summarize a new area of research but do not bring much innovation in regard to contributing to the existing knowledge or improving treatments of this particular group of patients. If I am to accept this paper for publication I need further discussion/conclusion elements. Regarding ethical aspects of the research I am concerned about the ticked off “inappropriate authorship”-box.

### Title/abstract

The title should include that tongue thickness and tongue pressure also were under review.

I believe the objectives of the abstract should include that this is a narrative review a systematic search was not performed. An outline of a separate discussion/conclusion section should be added. No newly generated conclusions are presented in the abstract.

### Response 1

I revised the title of the review article adding the words “a narrative review” as follows, “Tongue dysfunction in neurological and neuromuscular disorders: a narrative literature review”.

### Materials and methods

There is no separate materials and methods section. I don't believe that a narrative review necessarily should use excessive space for this section but I would at least like a brief description of how this review were made. What have been done to avoid bias and ensure review quality.

### Response 2

I added a section, Method, to mention how to research literatures which is relevant with the theme, “assessment of tongue movements, thickness, and pressure in patients with neurological and neuromuscular disorders”.

### Results

The summary of the literature seem acceptable and relevant and would enable

generation of conclusions or at least newly generated hypotheses.

#### Discussion

There is no discussion or conclusion section and the subheadings of the review do not include many elements of these crucial sections. This is my main objection towards this paper. As it is this paper primarily present already existing data but bear the potential for interesting discussions/conclusions that could contribute to the field of dysphagia research.

#### Response 3

In Discussion, I added suggestions for future study hypotheses, design, and execution in order to get to a point where such guidelines is a possibility as follows, “In the future, to establish a better way of managing dysphagia in patients with NNMD, we should collect such data and draft a guideline on methods to adjust diet or introduce tube feeding for the patients. In the process of producing the guideline, we need to clarify the characteristic in tongue dysfunction of each NNMD and the relationship between the degree of tongue dysfunction and appropriate nutrition management”.

I also added Conclusion as follows, “Through some studies outlined in this article, changes in tongue movements, thickness, and tongue pressure with progression of NNMD have been suggested. More studies are needed to develop guidelines what types of tongue dysfunction give an indication of adjusting diet and introducing tube feeding to NNMD patients.”.

#### References

Included references seem appropriate, relevant, and up-to-date however the author need more precise specifications regarding the speculative or factual nature of statements. When referring to own research, references to published articles should be included.

Tables and figures reflect and supplement the major subjects of the review and present an acceptable and concise data in a clear manner.

#### Response 4

I replaced Ref 23. (Umemoto G, Furuya H, Arahata H, Sugahara M, Sakai M, Tsuboi Y, Kikuta T. Tongue thickness and movement function in patients with neuromuscular disorders. Internal Medicine 2014; in press) which was not published yet with Ref.31. (Umemoto G, Furuya H, Tsuboi Y, Yoshikawa M, Tsuga K, Kitashima A, Kikuta T. Progression of Dysphagia and Change of Tongue Pressure in Neuromuscular Patients.

Journal of Japanese Association for Dental Science 2013; 32: 73-77.[in Japanese]) which was published in Japanese.

#### Specific comments

Abstract:

Page 2, line 7 - It should be added that tongue pressure is a surrogate measure of tongue strength

Introduction:

Page 4, line 3 - I suppose you performed a review of VF evaluation

Relationship between tongue pressure and swallowing pressure:

Page 13, line 11-15 – this is a interesting clinical aim but it lacks suggestions for future study hypotheses, design, and execution in order to get to a point where such guidelines is a possibility. Which criteria would such guidelines build upon and what impact would such guidelines imply.

#### Response 5

In Abstract, I added the phrase that tongue pressure is a surrogate measure of tongue strength.

In Introduction, I added the word “review” and revised as follows, “performed a review of VF evaluation”.

I added sections, Discussion/Conclusion, to mention more precise specifications regarding the speculative or factual nature of statements.