

## Peer Review File

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### Reviewer A

#### Comment:

1-“ageusia” refers to the loss of sense of taste. Ageusia may be caused by infections, certain medications, nutritional deficiencies or other factors. Loss of sense of taste is also a possible symptom of COVID-19.

2- Please exclude all other causes of the loss of taste before you blame Thymoma for the loss of taste.

**Reply:** Thank you for the suggestion. It is difficult to exclude all the probable causes of taste loss; nonetheless, we believe that ageusia in both cases is not caused by infections, medications, or nutritional deficiencies. Preoperative plasma albumin levels in both the cases were within normal limits. In case 2, serum iron, zinc, vitamin B2, and vitamin B12 levels were within normal limits. Both cases had ageusia before the COVID-19 pandemic.

#### Changes in the text:

In case 1, we added the following descriptions:

“The level of plasma albumin before surgery was within the normal limit.” (p. 3, line 20)

“In 2014 (before the COVID-19 pandemic)...” (p. 3, line 21)

In case 2, we added the following descriptions:

“Preoperative plasma albumin, serum iron, zinc, vitamin B2, and vitamin B12 levels were within normal limits.” (p. 4, line 20)

“...in 2015 (before the COVID-19 pandemic).” (p. 4, line 22)

#### Comment:

3- Please present the list of all medications both patients were on.

**Reply:** Thank you for the remark. Both cases had no medications before surgery.

#### Changes in the text:

In case 1, we added the following descriptions:

“He was on no medications before the surgery.” (p. 3, line 21)

In case 2, we added the following descriptions:

“He was on no medications before the surgery.” (p. 4, line 21)

#### Comment:

4- Please be tentative when claiming that the taste loss is from thymoma.

**Reply:** Thank you for this comment. We believe that the cause of taste loss in both cases is unknown; however, we have suggested that the presence of MG or other autoimmune factor might be associated with this phenomena, because taste disorder did not recover after surgery for thymoma but improve with immunosuppressive treatment (as shown in the Discussion section, p. 5, line 24).

### **Reviewer B**

This is an interesting paper of the rarely mentioned problem of the taste disorders in thymoma patients.

I suggest some minor language improvement.

**Reply:** We appreciate your feedback on our paper. We have resubmitted the revised version (in response to reviewers' comments) for the native speakers.

### **Reviewer C**

The manuscript presents an interesting topic on a rare case that shares similarities with existing reports. However, there are several concerns and questions that need to be addressed to improve the quality and clarity of the paper:

1. Regarding the figures, what is the significance of describing PET-CT and its relationship with the taste disorder, the main focus of the research? In Case 1, the SUVmax is 5.89, while in Case 2, it is 4.45; is it correct that there is no unit for these values? If there is no connection between the information obtained from PET-CT and the main topic of taste disorder, the figures may be considered unnecessary.

**Reply:** We completely agree with your feedback. We deleted the figures of PET-CT in both cases because there is no relevance between the information obtained from PET-CT and the main topic of taste disorder. We believe that SUVmax has no units, where SUV stands for standardized uptake value.

**Changes in the text:** We deleted Figures 1B and 2B; however, the main text remains unchanged.

2. In Case 1, the patient underwent steroid pulse and IVIG treatments. It is mentioned that the patient regained taste after oral food intake following the treatment for a MG crisis. However, the subsequent text states, "Despite the recovery of taste just after steroid pulse therapy." Please clarify whether the patient's taste recovery is attributed to both steroid pulse and IVIG treatments or only to the steroid pulse therapy before IVIG administration. Additionally, provide details on the duration and method of steroid pulse treatment, when IVIG was administered, and the dosage and duration of IVIG. Explain at which point during the treatment the taste was recovered or if it was only noticed after bulbar function had sufficiently recovered following the MG crisis and oral intake was resumed. Furthermore, please clarify whether the taste disorder began to worsen 1 year and 9 months after surgery and provide more details on the steroid or immunosuppressant use and any changes in dosage or medication during the taste disorder's decline. Lastly, mention if any muscle weakness or other MG symptoms appeared besides the change in taste.

**Reply:** Thank you for your pertinent comment. Steroid pulse and IVIG treatments collectively are responsible for the recovery of patient's taste, which was only noted after oral intake was resumed. According to your suggestions, we have added the descriptions on detailed information of steroid pulse therapy and IVIG therapy. The patient was followed up in another hospital after recovering from the

MG crisis, except for thymoma. Unfortunately, detailed information on the dosage or medication during the taste disorder's decline and physical symptoms is unavailable.

**Changes in the text:**

We added "and IVIG therapy" (p. 4, line 8).

We added the phrase "methylprednisolone [mPSL], 1,000 mg/day/body for 3 days" (p. 4, line 4).

We added the phrase "20 g/day/body for 3 days" (p. 4, line 6).

3. In Case 2, ptosis and double vision developed at 5 years and 2 months after surgery, and MG crisis occurred 4 months later. Please specify the MG treatments administered during these 4 months. Were there any taste changes before the MG crisis? Provide details on the method of steroid pulse treatment and whether the taste recovered immediately or after some time following the treatment. Also, describe the steroid or immunosuppressant use after steroid pulse treatment and whether there were any taste changes or if other MG symptoms remained stable.

**Reply:** Thank you for this comment. The diseased condition was unclear and ptosis and double vision developed after short time. Three months after developing ptosis and double vision, this patient was diagnosed with MG and was started with pyridostigmine (180 mg/body/day) and prednisolone (15 mg/body/day). There was no change in taste disorder before the MG crisis. MG symptoms have worsened despite the use of pyridostigmine and prednisolone, resulting in MG crisis. After steroid pulse therapy (mPSL, 1,000 mg/day/body) for MG crisis, the taste disorders gradually recovered (in approximately a week). The patient now has no taste disorder, and his MG symptoms are stable due to pyridostigmine (180 mg/body/day).

**Changes in the text:**

We added the phrase "three months after ptosis and double vision developed; treatment with pyridostigmine (180 mg/body/day) and prednisolone (15 mg/body/day) was initiated" (p. 5, line 2).

We added the phrase "There was no change in taste disorder before the MG crisis." (p. 5, line 5).

We added the phrase "After steroid pulse therapy (mPSL, 1,000 mg/day/body) for MG crisis, the symptoms of MG have disappeared. Taste disorders have also gradually recovered (within 1 week)." (p. 5, line 6).

We added the phrase "...MG symptoms (only pyridostigmine, 180 mg/body/day)..." (p. 5, line 8).

4. The content of the discussion section is overall lacking and necessitates further development and elaboration in the revised manuscript.

The authors speculate that the presence of MG or another autoimmune factor might be associated with the phenomenon, as the taste disorder did not recover after surgery for thymoma but improved by immunosuppressive treatment in the two cases. However, while Cases 1 and 2 did recover after immunosuppressant use,

Case 1 worsened again, which is not well explained. Based on the revisions in points 2-3, it would be helpful to provide additional explanations or hypotheses in the discussion section for this aspect.

**Reply:** We appreciate your suggestions for improving the content of the Discussion section. Accordingly, we have made some changes in response to your comments 2 and 3. It remains unclear why taste disorders have worsened in case 1 but not in case 2. We speculate autoantibodies exist in such patients.

**Changes in the text:**

We added the phrase “The reasons for worsening of taste disorders in case 1 and not in case 2 are still unclear.. Longer follow-up period is warranted to check if an autoimmune factor, such as autoantibody, is associated with this phenomenon.” (p. 6, line 3).