Author’s response to reviews

Title: The influence of taste disorders on dietary behaviors in patients with cancer under chemotherapy treatment

Authors:

Karla Sánchez MSc (ksanchez@medicasur.org.mx)
Ricardo Sosa Dr (drrsosa@hotmail.com)
Dan Green Dr (dgreen@medicasur.org.mx)
Cindy Rodriguez (zymaro_rodpach@hotmail.com)
Alessandro Laviano Dr (alessandro.laviano@uniroma1.it)
Daniel Motola Dr (dmotola@yahoo.com)
Oscar Arrieta (ogar@servidor.unam.mx)

Version: 4 Date: 9 March 2010

Author’s response to reviews: see over
Title: The influence of taste disorders on dietary behaviors in patients with cancer under chemotherapy treatment

Dear Dr. Nehme Gabriel:

We appreciate the comments made to our manuscript; undoubtedly they have increased the quality of our paper. Enclosed please find the revised manuscript and a detailed description point by point addressing the reviewers’ comments.

All authors have read and approved the final version of this manuscript, and concur with the submission.

Waiting your reply, I remain.

Yours sincerely,

Karla Sánchez Lara

Oncology Center Diana Laura Riojas de Colosio, Médica Sur Clinic and Foundation,
Mexico. Puente de piedra 150, Toriello Guerra, Tlalpan CP 14050. Mexico City.
Telephone: (55) 54 24 72 00 ext 4216. Fax (55) 54 24 72 10.
ksanchez@medicasur.org.mx
Referee Inger Skolin (Comments to author):

Reviewer’s report:
I have now read the authors’ response to my comments and I think that my original criticisms have been answered.
Reviewer: Barbara Stewart-Knox

Reviewer's report:

1. Of concern is that there are no baseline results for either dependent variable (dietary habits and/or taste acuity). The patients were not tested until after two chemotherapy sessions. As it stands, the report tells us that cancer patients on chemotherapy have less acute taste perception and poorer dietary quality than healthy individuals. Is this finding novel?

There are several articles describing that taste disorders are common in patients with cancer under chemotherapy and are implicated in anorexia and malnutrition. We didn’t find any study that measures taste disorders and associates this findings with nutrients consumption in an objective form.

Without baseline measures, it is impossible to determine if (any) taste deficit or change in dietary habits was related to the individual differences, the cancer, or the chemotherapy treatment. A repeated measures design including baseline would have been more appropriate/robust. Alternatively, matching the control and test groups might have reduced any error occurring as a result of this design weakness. Although there were no demographic differences between the cancer patients and controls, there may be other differences that would have warranted matching.

We appreciate your observations and consider them quite important for the development and enrichment of our study. In the new manuscript version, we matched the controls and cases groups for age and gender in order to reduce error and compared detection and recognition thresholds with two related samples test (Wilcoxon). This data have been added in data analysis. “When the control and test group were matched, we use the Wilcoxon Signed Ranks test and express the result like z (Mean Rank differences)” page 6 paragraph 1 line 5, and results section “When the control and test group were matched, the sweet DT presented statistical significance (p=0.027)” page 6, paragraph 3, line 3. and table 3 page 17.

The controls were healthy. Who were they and how were they approached and selected (this information was requested in the first review)?

We described it in patients and methods section “Thirty patient relatives were defined as controls, they were healthy and have no clinical history of acute and chronic disease” page 4, paragraph 2, line 7.

Given the lack of baseline data, a matched control group would be appropriate, perhaps as a third group?
We matched cases with controls by sex and age. This data have been added in data analysis "When the control and test group were matched, we use the Wilcoxon Signed Ranks test and express the result like z (Mean Rank differences)" page 6 paragraph 1 line 5, and results section “When the control and test group were matched, the sweet DT presented statistical significance ($p=0.027$)” page 6, paragraph 3, line 3, and table 3 page 17.

2. Was the range of the taste solution dilutions sensitive enough? As pointed out in the previous review, there were apparent floor effects (no detection) for Umami. Suggest that the results for Umami be omitted?

There are no standard dilution range in written literature. Dilution range was based on results from non-published previous studies made in our hospital. Taste sense in general population is not educated to identify umami flavor. This new taste is described in our study population like “different to water” but none of them could describe the exactly sensation. People are used to recognized salty, sweet, bitter and acid flavor but not this novel taste.

3. The data analysis fails to address the research question of whether dietary habits and taste acuity are related in chemotherapy patients. Correlation might be more appropriate to answer the question of a relationship between taste acuity and dietary habits. ANOVA would enable dietary habits, taste acuity and zinc status to be analysed together and allow a range of other relevant variables to be included and controlled. The full statistical values are not reported. Suggest the authors consult a statistician.

In this last version we improved the statically analysis. Association between dietary habits and taste acuity was analysed by Mann-Whitney U test because there are no parametrical variables. ANOVA couldn’t be used because only two groups with no parametrical distribution were included.

4. Suggest the authors enlist the assistance of an English writer to correct grammar and punctuation (particularly the abstract) should they seek to develop the discussion.

We did it, thank you for your suggestion