Reviewer’s report

Title: Feasibility and acceptability of combining cognitive behavioural therapy techniques with swallowing therapy in head and neck cancer dysphagia

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Reviewer: Henry Adeola

Reviewer's report:

Comments to the Author

I reviewed your research paper entitled "Feasibility and acceptability of combining cognitive behavioural therapy techniques with swallowing therapy in head and neck cancer dysphagia".

Patterson et al, investigated the feasibility of combining psychosocial interventions such as cognitive behavioural techniques to swallowing therapy (CB-EST) during speech and language (SLT) for head and neck squamous cell carcinoma (HNSCC) patients.

The authors identified that greater attention has been paid to mechanical perioperative rehabilitation of dysphagia in HNSCC patients; albeit evidence-based benefits of solo exercise therapy for dysphagia is scanty. Evidence available demonstrates that good study designs to assess the effect of general psychosocial interventions for HNSCC patients are scarce. The authors suggested that the potential of combining psychological- and impairment-based treatment has being explored and may benefit the ability of patients to cope with swallowing difficulties.

Although problem-focused psychosocial interventions have been used to demonstrate benefits in terms of better quality of life (QoL) and reduced psychosocial distress in HNSCC patients; acceptability of cognitive behaviour enhanced swallowing therapy (CB-EST) is poorly researcher in HNSCC patients.

Major comment

The methodological approach employed was good, however, because the patients were self-selected (willing and happy), there is a high tendency of bias in the outcome of the study.

Also, there are no controls in this study. Why is that? What would be the best model for a dysphagia study? The Authors should discuss in the paper why controls were not used in this study.
Considering that a significant number of patients were early stage HNSCC (stage 1 & 2 were a total of 15 patients)…. Was there a difference between the response/outcome for the early stage HNSCC (Stage 1 and 2) as compared with the late stage HNSCC (stage 3 and 4)? This was not clear from the paper. The authors need to include further discussion on this in the manuscript.

Specific comments

In Table 1 (Patient baseline characteristics and demographics for consented CB-EST patients) you had a total of 29 patients for "Stage" (Stages 1-4 were 2, 13, 7 and 7 respectively). If 30 patients gave consent, how come you ended up with staging for only 29 patients? And all other categories summed up to 30?

From Table 1, the age range falls into the elderly category (49-79) with a mean of 59 years. Did the authors rule out loss or impairment of neuromuscular function which is commoner in the elderly age group? How many of these enrolled patients had Parkinson's, Alzheimer's or other diseases that interfere with neuromuscular function? This needs to be discussed in this paper. The confounder effect of neuromuscular impairment on dysphagia is significant.

Also, how many of these patients had tumours affecting the vocal cord/ voice of the patients? Loss of voice and inefficient deglutition would definitely affect the psychosocial status and quality of life of these patients. How did this interfere with the study? The authors need to demonstrate clearly that all other possible confounders that can lead to spurious results have been taken care of.

Sample size is small as alluded by the authors, and hence a larger sample size would be required to confirm the benefit of using CB-EST for HNSCC patients.

On page 8, in the "Feasibility and acceptability as measured by recruitment and retention" section of results…. Although I am aware that patients populations were sampled, some readers would find the word "retained sample" used (in the penultimate sentence of this section) for actual patients offensive, hence, the authors should change it to "retained patients" as used in the opening sentence of the "Feasibility and acceptability as measured by intervention fidelity" section.

A double blinded randomized controlled trial would be a better approach for validating this feasibility study; and the needed number (as described in future work section of the manuscript) of well selected patients should be recruited to ascertain the applicability of CB-EST to dysphagia in HNSCC.

Finally, the authors concluded by make an early case for incorporating CB-EST into the routine practice of SLT. I guess this is still a remote thought. A robust and rigorous validation study using a double blinded randomised controlled trial needs to be carried out first to ascertain the
potential of the CB-EST approach. Also, the authors need to consider the acceptability of adding CB-EST to SLT practitioners' routine duties, especially in the context of an unchanging cost of employment.

Recommendations: I believe that there are significant limitations related to this study that would need to be addressed in a major way prior to acceptance in a journal of this type. This is a good preliminary feasibility study and can be published on the BMC cancer after all corrections have been made.

**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.

No

**Are the conclusions drawn adequately supported by the data shown?**
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Yes

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