Reviewer’s report

Title: Prevalence of thoracic pain in patients with chronic obstructive pulmonary disease and relationship with patient characteristics: a cross-sectional observational study

Version: 0 Date: 22 Dec 2015

Reviewer: Stephen Thielke

Reviewer's report:

This work focuses on an important topic, and the findings advance the science. The manuscript is well-written. The study measured a variety of relevant outcomes.

My primary concern relates to the statistical approach and interpretation.

1. The sample sizes were relatively small, and there were 36 comparisons in Table 1. Using a p-value of 0.05 is not an appropriate statistical approach. With 36 comparisons, you would assume that by chance two would show p-values <0.05. There may be some selection bias, and it was a convenience sample.

A Bonferroni adjustment would render all of the results non-significant. Other types of adjustment would probably render all non-significant except maybe age, and this would not be a main finding.

In terms of interpretation, my read of Table 1 and the Figure is that there were no strong predictors of thoracic pain. This is unexpected in light of previous hypotheses about why people with COPD and/or dyspnea would report thoracic pain.
I discourage presenting the domains with p < 0.05 in the abstract, and would be more comfortable concluding that after considering multiple comparisons, there were no factors that strongly influenced the presence of thoracic pain.

2. Your finding about thoracic pain being the only type of pain reported was very interesting. "Thoracic pain was reported by 36 participants (53.7%)(Figure 1). Of these, 27 (75.0%) only reported thoracic pain." I recommend that you discuss this more. This article would be good to consider:


The big unresolved question is then, what causes thoracic pain among people with COPD? You state that "Future studies should explore the mechanisms underlying thoracic pain in COPD as well as interventions to optimally treat thoracic pain in these patients", which is a good suggestion, but needs to be clarified. Exactly what would one study? Pain logs might be useful (i.e. timing and intensity of pain), or laboratory models (e.g. measuring pain during exercise), or with factorial treatment trials (i.e. pain before and after analgesic, inhaler, or both).

An even bigger question is exactly what does thoracic pain signify? It does not seem to be a marker for any particular physiological parameter. Can it be clearly differentiated from other unpleasant experiences, like dyspnea? Your work can be an important step in this investigation, but mainly to highlight negative findings.

To summarize: I recommend that you put less weight on the statistics and more on description, and expand the discussion a bit.

**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.

No

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:

Not suitable for publication unless extensively edited

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