Reviewer's report

Title: Short-term physiological effects of nicotine-free e-cigarette compared to regular cigarette in smokers and non-smokers: a randomized trial

Version: 2 Date: 13 March 2015

Reviewer: Paul Thomas

Reviewer's report:

An interesting field and an early entry to a growing body of literature.

The work basically indicates that in a small group of smokers & non-smokers very few changes were observed when using NFEC.

Specific

Abstract.

This would be improved by adding the data and not just quoting p values

Background

This is not well written. It needs more fluency in the statements so that the points logically lead from one to the next.

Methods

Please note this is not a ‘trial’ – change to ‘study ‘ throughout.

Subject characteristics are usually reported in the Results. Please move.

Protocol/Design

Ad Lib use of cigarettes: this is unfortunate and suggests that there was no standardisation between subjects: it is likely that a current smoker would smoke more than a non – smoker. Please address this point in the Discussion at least.

P5 line 99 is that paragraph referring to the FENO, Co or the spirometry?

Discussion

This is poorly organised. The paragraph starting at line 216 needs to carry on after the para starting at line 196.

The effectiveness of this device as an aid to smoking cessation can be kept, although it is not really relevant to this paper and could be made much shorter.

As noted about more needs to be done to discuss the limitations of the study design: only crude spirometry has been assessed, DLCO and lung volumes could have been performed and perhaps measurements of airway reactivity and
particulate/vapour burden.

Abstract – change ‘claimed to have been expressed’
Line 127: remove ‘behaviour’ and change to ‘The FECO values „,„are shown in Figure 1’
143 161, not significantly different
146, 148 substitute ‘changes’ for ‘modifications’
135, 148 Change to subjects studied rather than studied subjects
150 Change ‘homogeneous’ to ‘similar’
152 effect of smoking the two cigarette types..
154, 156 non-smoking subjects
182 induced
216 concerns

Level of interest: An article whose findings are important to those with closely related research interests

Quality of written English: Needs some language corrections before being published

Statistical review: No, the manuscript does not need to be seen by a statistician.

Declaration of competing interests:
NA