Reviewer's report

**Title:** Prevention of morbidity in sickle cell disease - qualitative outcomes, pain and quality of life in a randomized crossover pilot trial of overnight supplementary oxygen and auto-adjusting continuous positive airways pressure (POMS 2a): study protocol for a randomized controlled trial

**Version:** 3  
**Date:** 12 April 2015

**Reviewer:** William Zempsky

**Reviewer's report:**

**Major revisions**

1) The inclusion exclusion criteria exclude patients with severe disease but do nothing to exclude those with mild disease i.e. no pain. The individuals are not appropriate for study and the authors should consider excluding those. We have used the sickle cell pain burden interview in our studies for this purpose. J Pain. 2013 Sep;14(9):975-82. doi: 10.1016/j.jpain.2013.03.007.

2) The wide age range in the pediatric portion of the trial is problematic. I think it is unlikely that 8 year olds and 17 year olds are similar in their experience especially regarding sleep. This is directly relevant to feasibility and acceptability. I would recommend using a considerably older cutoff (13 or so).

**Discretionary revisions.**

3) Though QOL is a secondary endpoint which is unlikely to be impacted by such a brief intervention the lack of re-testing post washout period before the 2nd intervention is problematic. How do we know the washout period is appropriate? unless the QOL not to mention the blood studies are retested to ensure return to baseline

4) I am not sure the secondary endpoint are relevant for this study. They are unlikely to be impacted by such a brief intervention. they could be removed without impacting the study.

**Level of interest:** An article of importance in its field

**Quality of written English:** Acceptable

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

**Declaration of competing interests:**

I declare that I have no competing interests