Reviewer’s report

Title: Protocol of a randomized open label multicentre trial comparing continuous intrajejunal levodopa infusion with deep brain stimulation in Parkinson’s disease. The INfusion Versus STimulation (INVEST) study.

Version: 0 Date: 20 Nov 2019

Reviewer: Fenna Phibbs

Reviewer's report:

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Poppelen et al. are proposing a study comparing outcomes in PD patients treated with DBS and CLI. The study idea is sound and one of interest to the PD community. There are some concerns with the design:

1. The plan for an experienced centre being one that has implanted at least 5 patients each of the past two years is concerning. Given that the idea of the study is to compare outcomes, they should be on level ground. CLI is much more straightforward from a surgical management and programming standpoint than DBS. The experience of the surgeon and the DBS programmer are the most important for DBS, 5 per year is not enough to make these two comparable groups. There should be some discussion on the surgeon and programmer experience, if the program is small, but the provider experience is larger this should be mentioned.

2. Also given that there were only be 33 patients in each group stratifying in the experience of the center will skew the results. There is no mention of how many strata there will be for the centres.

There may also be limits with recruitment given the limitations of only getting the Medtronic 4 contact lead with the new directional systems being available and which may have an advantage. This will also limit the impact if CLI appears to have an advantage.

Are the methods appropriate and well described?
If not, please specify what is required in your comments to the authors.

No

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?
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I am able to assess the statistics

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1. I have consulted for Abbive, Medtronic, Boston Scientific and Abbott

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