Reviewer’s report

Title: Obese adolescents exhibit a constant ratio of GH isoforms after whole body vibration and maximal voluntary contractions

Version: 1 Date: 14 Nov 2018

Reviewer: Nigel Glynn

Reviewer’s report:

The authors present a small study of eight obese boys in whom the GH response to dynamic exercise manoeuvres was evaluated. They demonstrated that the 22kDa:20kDa ratio was preserved throughout and whole body vibration alone did not generate a significantly stimulate GH.

The results are interesting; however, I believe the authors need to be more guarded about their conclusions particularly in view of the highly selected small cohort studied. The Methods section should provide greater explanation and justification for the selection of this patient cohort.

Why were only male subjects recruited - was this a pre-specified inclusion criterion or did it occur during open, unselected recruitment?

Why were adolescents chosen as the research group as opposed to adults?

The authors claim that the results will be applicable to doping test for GH in athletes who have a high BMI/ However, it would seem that a sedentary obese teenager is very different to any athlete, regardless of BMI. Can the authors provide any further justification for these claims?

Furthermore, the methods mentions that the subjects were undergoing an "integrated body weight reduction program".

What does this program involve? Were the subjects restricting calories?

Were they confirmed to be euthyroid and eugonadal? If so, this data should be provided.

Did any have diabetes or glucose intolerance? Did any have Prader-Willi syndrome?

The authors could expand the discussion regarding the phenomenon of low serum GH concentration in obesity.

Page 4, line 53: Should be "per diem"

The authors use the term "Anyway.." at the beginning of many sentences throughout the text. This should be reworded.
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?
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?
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I am able to assess the statistics

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