Reviewer's report

Title: Evaluation of propofol anesthesia in morbidly obese adolescents

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Reviewer: Bruce Green

Reviewer's report:

Thank you for inviting me to review the manuscript entitled "Evaluation of Propofol Anesthesia in Morbidly Obese Adolescents'.

The manuscript evaluates an important clinical problem of how to dose propofol in obese adolescents and is observational in nature.

Major Comments

I have several major comments. The clinical problem of how to dose obese patients is well understood. What seems less well understood is how to design a clinical trial that allows useful analyses to answer the question. Understanding PK-PD relationships across body size in PK-PD requires a design across a range of subjects, from normal through to obese. This study does not have any normal weighted subjects included in design, hence determining an answer to the question is challenged and the manuscripts validity questionable.

On that point, there is no real attempt to answer the question, so I am unsure how this helps clinicians?

Finally, some of the authors have published quite sophisticated analyses of similar data in the adult population. Why was this approach not taken here? The descriptive approach here cannot help prescribers identify a suitable dose. Surely it would be more scientifically advisable to combine data from normal and obese adults, create a super-dataset and then work out the appropriate dosing regimen for obese children using simulation techniques?

Additional Comments

1) page 5. Is Servins formula for ABW valid in children? What is the impact of using this metric? Given this is an entirely empirical equation with no physiological derivation, why was it chosen for dosing? Is this the reason for the over-dose?

2) Figure 1 is problematic. It is better to look at bias and precision between the size descriptors. As mentioned above, why exclude normal weighted subjects in the analysis? Also, why assume it is a linear relationship and report an r value? Typically the axes are ask the other way round with dose on the y and Weight on the x axis to allow identification of non-linear relationships.

Level of interest: An article of limited interest
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