Reviewer’s report

Title: Effects of continuous infusion of etomidate at various dose rates on adrenal function in dogs

Version: 2 Date: 30 October 2015

Reviewer: Stuart Forman

Reviewer’s report:

My recommendation is: Minor Revisions required

Comments:

The authors have made most of the requested changes, but several more minor changes are needed prior to publication.

1) The statement that ACTH stimulation was not performed because this is not routine in patients makes no sense. This is an animal experiment presumably designed to assess adrenocortical function, so the choice and use of an inferior test should be discussed. Gold-standard adrenal function testing involves ACTH stimulation to assess inducible cortisol production. Without ACTH, the decreased serum cortisol and aldosterone values reported in this paper are presumably due to diminished non-stimulated synthesis coupled with clearance (either metabolic or excretory) of hormones that were present. The authors should therefore research the literature and inform readers of the half-life of these hormones in dogs. Are the rates of disappearance consistent with total or only partial inhibition of synthesis?

2) The statement that experiments were carried “out under isothermal conditions” is confusing and not informative. The temperature of the environment where the experiments were performed must be reported. If the animals' temperatures were recorded, the authors must report the values. If they were not recorded, please state this fact in methods and in your discussion you must note that altered temperature may have affected the results.

3) Please give references for the "clinical dose range" that you used as a basis for dosing in dogs. Was there an allometric adjustment for animal size? If not, you should discuss the fact that dogs may require different weight-based doses of anesthetic than humans.

4) You must include in the Methods the manufacturers of the radioimmunoassays that were used for various hormone levels.

5) You must report whether errors in Table 1 are sd or sem.

6) Figure one should display errors as well as mean values.