Reviewer’s report

Title: Longitudinal Study of Electrical, Functional and Structural Remodelling in an Equine Model of Atrial Fibrillation

Version: 1 Date: 23 Jun 2019

Reviewer: Agnieszka Noszczyk – Nowak

Reviewer's report:

1. Explain why ECG parameters were not evaluated and compared after cardioversion. Why P-wave dispersion (Pd) were not evaluated before and after cardioversion. Pd is also evaluated in humans as a prognosis index in case of AF and change in Pd may reflect the disturbances in the inter and intra-atrial conduction.

2. Why flecainid was chosen for cardioversion?

3. Line 121 - Electrophysiological studies were not performed. In this section are presented methods for evaluation of ECG.

4. In the statistical analysis section it is written: "The qPCR data were subsequently Bonferroni corrected. Echocardiographic data were compared to baseline measurement with a one way ANOVA followed by Dunnett's post hoc test for multiple comparisons". In response to the reviewer it is written:"Changes in AFR and other ECG parameters between baseline and day 55, were assessed using student's t-tests where paired analysis were performed when appropriate. Difference in fibrosis and ion channel expression between AF and control groups were also assessed using student's t-test." Please explain it. Student's t-test is dedicated to parametric data about normal distribution.

5. How is the correlation of age and fibrosis? In humans, in dogs fibrosis progresses with age.

In my opinion many electrophysiological data have been lost (rest ECG, pacemaker, EP study from pacemaker, HRV during SR from holter monitoring) and and the presented data does not show electrical remodeling.

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?
If not, please explain in your comments to the authors.

Yes

Are you able to assess any statistics in the manuscript or would you recommend an additional statistical review?
If an additional statistical review is recommended, please specify what aspects require further assessment in your comments to the editors.

I recommend additional statistical review

Quality of written English
Please indicate the quality of language in the manuscript:

Acceptable

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