OPEN PEER REVIEW

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https://sites.kowsarpub.com/kowsar/knowledgebase/category/tree.html#opr.html

Archives of Neuroscience
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Peer Review Report for "Effect of Nortriptyline on Spreading Depolarization"

Author(s): Ebrahim Behzad, Mojdeh Ghabaee, Mohammad Reza Bigdeli, Farshid Noorbakhsh, Ali Gorji, Mahmoudreza Hadjighassem

Review Timeline:

Submit Date: 23 Feb 2020
Revised Date: 20 Apr 2020
Accepted Date: 22 Apr 2020

Revision (0)

Here, you can see the **Reviewers**, **Associate Editors** and **EICs'** comments from the beginning to the end of the revision process.

REFEREE: Reviewer | **Revision** (0)

8 Mar 2020

Dear AE,

1- It's better to explain more about the nortriptyline in the introduction instead of discussion and mention why the authors selected it to assess the mechanisms involved in the spreading depression.

2- In the part of methods, section Electrophysiological recording, paragraph 1 line 11 in the sentence of Tip of one of the extracellular electrodes was placed in CA1 and the other in neocortex, it should be mentioned in which region of neocortex the electrode was placed.

3- In the part of methods, which features of SD wave and IPSPs were measured? It should be mentioned.

4- In figure 1: part c the axis legend of graphs has been duplicated. It's better to remove one of them.

5- In Figures 1 and 2, the scales have been drowned under each wave trace. It's better to remove and just one of them is enough.

6- In figure 1: part B, the scale of SD waves for cortical tissue is not the same. It seems that the SD wave for Nortriptyline has been extended. It's suggested to replace it with another wave.

7- In the tables, the significant differences should be indicated by some symbols.

Thanks.

REFEREE: Reviewer | **Revision** (0) 1 Apr 2020

Dear AE,
The authors report on an important and interesting topic of the effect of nortriptyline on spreading depolarization in cortical and hippocampal tissues and on the electrophysiological properties of CA1 hippocampal pyramidal neurons. Results show the Nortriptyline made a significant increase in the amplitude of spreading depolarization in cortical and hippocampal tissues relative to control but did not change the duration and number of spreading depolarization significantly in each of the tissues. I think these results are good but as mention to the authors discussions about nortriptyline effects and limitations of the methodological part I have a suggestion for authors in the future study they could combine some dogs with synergist effect to evaluate the effect on complex spreading depolarization phenomenon.
Thanks.

REFEREE: Associate Editor | **Revision** (0) 3 Apr 2020

Dear EIC
The reviewer(s) have recommended publication, but also suggest some minor revisions to the manuscript. Therefore, I invite the author to respond to the reviewer(s)' comments and revise his manuscript.
Kind regards,

REFEREE: EIC | **Revision** (0) 3 Apr 2020

Dear Author,
Your article is reviewed by the reviewers carefully. According to their comments, this document needs minor revision. Please follow their comments as requested.
Thanks.

OPEN PEER REVIEW

Revision (1)

Reply to Reviewers

Ideally, the reviewing process can significantly improve the submitted manuscripts by allowing the authors to take into account the advice of reviewers. Author(s) must reply to all reviewers' comments in a separate Word file, point by point. A "**Reply to Reviewers**" document is submitted along with revised manuscript during submission of revised files, summarizing the changes that the authors made in response to the reviewers' comments. The responses to reviewers' comments specifies how the authors addressed each comment the reviewers made.

You can read the authors' responses to the reviewers' comments in the next page.

Reviewer's Comment	Corr. Author's Reply	Description
Reviewer 1		
1- It's better to explain more about the nortriptyline in the introduction instead of discussion and mention why the authors selected it to assess the mechanisms involved in the spreading depression.	It was done and highlighted in the manuscript.	---------
2- In the part of methods, section Electrophysiological recording, paragraph 1 line 11 in the sentence of Tip of one of the extracellular electrodes was placed in CA1 and the other in neocortex, it should be mentioned in which region of neocortex the electrode was placed.	It was done and highlighted in the manuscript.	It was also added to Fig 1, part A and to description of the figure (highlighted).
3- In the part of methods, which features of SD wave and IPSPs were measured? It should be mentioned.	It was done and highlighted in the manuscript.	---------
4- In the figure 1: part c the axis legend of graphs has been duplicated. It's better to remove one of them.	It was done	---------
5- In the figure 1 and 2 the scales have been drown under of each wave trace. It's better to remove and just one of the is enough.	It was done	---------
6- In figure 1: part B, the scale of SD waves for cortical tissue is not the same. It seems that the SD wave for Nortriptyline has been extended. It's suggested to replace with another wave.	It was replaced	---------
7- In the tables the significant differences should be indicated by some symbols.	It was done and highlighted in the manuscript.	The rows and columns of each table were also replaced with each other to match the new situation
Reviewer 2		
The authors report on an important and interesting topic of the effect of nortriptyline on spreading depolarization in cortical and hippocampal tissues and on the electrophysiological properties of CA1 hippocampal pyramidal neurons. Results show the Nortriptyline made a significant increase in the amplitude of spreading depolarization in cortical and hippocampal tissues relative to control but did not	It was added to the discussion and highlighted in the manuscript.	We will consider it in our future studies.

change the duration and number of spreading depolarization significantly in each of the tissues.

I think these results are good but as mention to authors discussions about nortriptyline effects and limitation of the methodological part I have a suggestion for authors in the future study they could combined some drugs with synergist effect to evaluate the effect on complex spreading depolarization phenomenon.

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Revision (1)

Here, you can see the **Reviewers**, **Associate Editors** and **EICs'** comments from the beginning to the end of the revision process.

Fariba Karimzadeh: Reviewer | **Revision** (1) 22 Apr 2020

Dear AE,
The study is reviewed carefully. According to comments and revisions by the author, this manuscript is accepted.
Thanks

REFEREE: Associate Editor | **Revision** (1) 22 Apr 2020

Dear EIC
The reviewer(s) have recommended publication.
Kind regards,

REFEREE: EIC | **Revision** (1) 22 Apr 2020

Dear Author,
The document is reviewed carefully by the reviewers. According to their comments and your revisions as requested, this manuscript is accepted.
Thanks.