Author's response to reviews

Title: Intrathecal injection of fluorocitric acid inhibition the activation of glial cells to reduce rat mirror pain

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Dear Editor,

We would like to submit the enclosed manuscript entitled "Intrathecal injection of fluorocitric acid inhibition the activation of glial cells to reduce rat mirror pain", which we wish to be considered for publication in BMC Anesthesiology.

The growing evidence has shown that unilateral nerve injury results in pain hypersensitivity not only in ipsilateral side but also in contralateral side to the injury site. This phenomenon is known as the Mirror image Pain (MIP). Glial cells has been indicated in the mechanism of MIP. However, it is not clear how glial cell involved in the MIP. In present study, unilateral L5 spinal nerve injury (SNL) induced bilateral pain hypersensitivity, which indicate the presence of Mirror image pain. By using immunohistochemistry and western-blot methods, SNL also increased the expression of GFAP and Nav1.7 in the bilateral dorsal root ganglion of rats.

Intrathecal injection fluorocitrate, a glial inhibitor, not only relieved bilateral pain hypersensitivity but also reversed the increase of GFAP and Nav1.7 expression in DRG. These results indicate a new mechanism that the inhibition of activated glial cells involved in the mirror image pain by regulation of Nav1.7 expression.

Finally, this paper is our original unpublished work and it has not been submitted to any other journal for reviews.

Sincerely yours,

Jing