Author's response to reviews

Title: Rhizotomy targeting the intermediate nerve, the glossopharyngeal nerve and the upper 1st to 2nd rootlets of the vagus nerve for the treatment of laryngeal neuralgia combined with intermediate nerve neuralgia-a case report

Authors:

Qiang Zong (qiangzong@163.com)
Kai Zhang (zhangkaitg@163.com)
Guangliang Han (guanglianghan@163.com)
Shengye Yang (shengyeyang@163.com)
Lijiang Wang (lijiangwang@163.com)

Version: 4 Date: 18 March 2014

Author's response to reviews:

Dear Dr. Rowles,

We are extremely grateful to you and the reviewers for the professional and constructive comments to our manuscript, entitled "Rhizotomy targeting the intermediate nerve, the glossopharyngeal nerve and the upper 1st to 2nd rootlets of the vagus nerve for the treatment of laryngeal neuralgia combined with intermediate nerve neuralgia-a case report". (Ms. Ref. No.: 1823827779953982)

The issues raised have been addressed as following.

We hope the revised manuscript meet the requirements for publication in BMC Surgery.

Thank you again for your guidance in enhancing the quality of our manuscript.

Sincerely,

Kai Zhang, Ph. D, MD

Reviewers’ comments:

Reviewer 1:

1- The English language needs to be improved.

We have already asked a professional company help us smooth the English in the manuscript.

2- The introduction is short with little pertinent information

We added some information and hope it could help.

3- Although the intermedius nerve is sometimes sectioned for laryngeal neuralgia and some discussion has been posted regarding including sectioning if this nerve within the rest of the sectionings of the cranial nerve, 2 key elements of this paper are:
- whether this is a laryngeal neuralgia and the diagnostic work-up around it, which has been touched very briefly, and

- whether sectioning of laryngeal nerve was needed and more discussion and reference to previous reports in the literature is needed

Thanks for reviewer’s suggestion. We added more detailed information to identify the laryngeal neuralgia, and explain the necessary for sectioning of laryngeal nerve, and also discussion and reference.

For the patient, paroxysmal burning pain in the right Pharynx, the skin covering the right front side of the neck and deep in the ear, an electric shock and knife cutting pain, each episode of pain lasted a few minutes, and then relieved oneself. Swallowing can provoke the pain, with the regional blockage of the right laryngeal nerve, the pain in the thyroid perichondrium and the skin covering the right front side of the neck was relieved; there is laryngeal nerve neuralgia by stimulating the right side of the pharyngeal piriform fossa to provoke the pain. But the pain deep in the ear cannot be explained by the same theory. Injecting tetracaine lidocaine to tympanic cannot reduce the pain; the regional blockage with lidocaine around ear is invalid as well as spraying Lidocaine to the throat. All these can exclude auriculotemporal nerve, the great auricular nerve, glossopharyngeal nerve neuralgia. Imaging examination reveal no occupied lesions on the cerebellopontine angle. Therefore, our diagnosis is intermediate nerve neuralgia.

Intermediate nerve Neuralgia is also called geniculate neuralgia, main performance are electric shock pain in the distribution area of intermediate nerve, such as intermittent pain in the deep of ear, and Electric shock tingling pain, these pains are exactly as same as tympanic nerve neuralgia which is branch of glossopharyngeal nerve. The pains are all on one side, and completely disappear during intermitten period.[8] Stimulating the external auditory canal, swallowing, or speaking can trigger pain. Clark and Taylor (1909) first reported one case cured by severing off intermediate nerve under the pillow. Fanzhong (1989) reported a case by severing off intermediate nerve from the back of the lost path.[2] [6] [7] When laryngeal nerve neuralgia combined with intermediate nerve neuralgia occur at the same time, only severing off laryngeal nerve cannot reveal the pain thoroughly, because the glossopharyngeal nerve, intermediate nerve and the upper 1st to 2nd rootlets of the vagus nerve are around, so we need to sever off the glossopharyngeal nerve, intermediate nerve and the upper 1st to 2nd rootlets of the vagus nerve together.

Reviewer2:
This is a well done description of a rare case of laryngeal neuralgia, diagnosed and treated with surgery. The surgical procedure was similar to glossopharyngeal neuralgia because of association between these types of neuralgia. I believe it is well written and should be publicated in BMC Surgery.

Thanks for the reviewer’s comments.