

# Osteopathic Manipulative Treatment for Facial Numbness and Pain After Whiplash Injury

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## BACKGROUND FROM DAN MURPHY

The trigeminal nerve, cranial nerve V, has a sensory nucleus found in the pons, medulla, and into the upper cervical spinal cord.

The trigeminal nerve has 3 divisions: ophthalmic, maxillary, and mandibular; These divisions provide sensation to the face and a large part of the scalp.

Whiplash mechanisms can subject these neurological tissues to traction or compressive injuries, resulting in symptoms.

## KEY POINTS FROM THIS ARTICLE:

- 1) This is a report of a case of right facial numbness and right cheek pain after a whiplash injury. The author proposes that the symptoms were secondary to a strain injury to the right trigeminal nerve.
- 2) The strain on the trigeminal nerve likely occurred at the upper cervical spine, and at the brainstem, the nerve's point of origin.
- 3) Manipulative treatment applied at the level of the cervical spine, suboccipital region, and temporal bone cranial region alleviated the patient's facial symptoms.
- 4) This author performed a literature search using the US National Library of Medicine's PubMed database with the key words "**trigeminal nerve dysfunction whiplash.**"
- 5) In one study, they found that 44 of 50 patients (88%) suffered frequent jaw or face pain as a consequence of chronic whiplash-associated disorder.
- 6) HISTORY:  
A female patient presented with a complaint of right facial numbness and right cheek pain 24 hours after a rear-end motor vehicle collision. In addition to the right facial numbness and right cheek pain, she reported clear watery drainage from the right ear, discomfort in the right shoulder and right side of the neck where her seat belt had contact, and vertigo.

7) EXAMINATION

- Decreased light touch sensation in the field of the right trigeminal nerve.
- Right paraspinal cervical spasm from the level of the C2 to C5 vertebrae.
- An extended occipitoatlantal joint.

8) TREATMENT

- Myofascial release to the spasm along the cervical spine.
- Occipitoatlantal decompression to treat the extended occipitoatlantal joint.
- The right temporal portion of the patient's skull was restricted and asymmetric compared with the left. This finding was mechanically tractioned until perceived as being symmetrical.
- These approaches relieved the patient's symptoms, and the patient remained symptom free at 4-month and 6-month follow-up.

9) "The OMT techniques used for the patient described in the current report were myofascial release, inhibition, counterstrain, and cranial OMT."

10) Decompression of the extended occipitoatlantal region relieved the numbness in the right side of the patient's face. "The right facial involvement implicates the fifth cranial nerve, or the trigeminal nerve."

11) "The right cheek numbness that the patient reported likely originated in the maxillary nerve."

12) Restriction anywhere along the trigeminal nerve affects facial sensation.

13) "Patients with upper cervical disk herniation will sometimes present with trigeminal sensory neuropathy."

14) "The occipitoatlantal and cervical areas proved to be the chief factors in the patient's facial numbness. The right temporal bone also played a major role in the patient's facial pain."

15) "Manipulative treatment offers relief for patients by addressing the cause instead of masking the symptoms, as seen in the present case."

COMMENTS FROM DAN MURPHY:

This study supports that whiplash injury can cause injury to the branches of the trigeminal nerve, or to the brainstem nuclei of the trigeminal nerve.

This study also supports that mechanical therapy can effectively treat such injuries, resolving patient's signs and symptoms.