

## **Headache in chronic acceleration injury of the cervical spine**

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Mumenthaler M.

FROM ABSTRACT

In the past 10 years the author studied 191 patients evaluated by a medical expert.

All were victims of a road accident.

129 had suffered a rear-end collision, 33 a frontal collision and 27 another type of road accident with whiplash mechanism, but without head trauma.

The time elapsed since the accident was on average 4.23 years (1 to 26 years).

174 of the 191 suffered a new headache after the accident. This means that 91% of the whiplash victims with long-standing health problems had a new type of headache after their accident.

The great majority (91%) still suffered from headaches in addition to the neck pain and other typical symptoms of whiplash injury.

In 71% of those suffering from a new type of headache, the headache was already present the first day after the accident.

The headache mostly irradiated from the neck to the frontal and retroorbital region, either bilaterally or mainly on one side.

124 of these 174 [71%] persons had their first headache immediately or not later than one day after the accident, 2 [1%] in the course of the first week, 9 [5%] in the course of one month following the accident and in 39 [22%] this information was not available.

THIS AUTHOR ALSO NOTES:

“Headaches due to changes in the cervical spine were described 80 years ago by Barré and his pupil Liéou.”

The symptoms of cervical spondylosis surprisingly resemble those seen after whiplash injuries.

“Cervicogenic headache has now been formally accepted by the community of the world’s most respected headache specialists.”

This author lists a comment published in 2004 by the International Headache Society, noting:

"... there is no good evidence that ongoing litigation, with settlement pending, is associated with prolongation of [post-whiplash] headache."

This author notes that in this study of 191 patients with post-whiplash headaches that "neck pain was nearly always present." **[Important]**

The types of persistent headache after the whiplash injury in these 164 persons were as follows:

In 66% the headache was bilateral or diffuse; of these patients, 69% described the pain as progressing from the neck forward to the vertex or more frequently to the forehead or behind the eyes.

In 18% of patients it was sometimes bilateral and sometimes unilateral.

In 9% it was always unilateral.

In 2% a typical migraine began and recurred frequently.

The frequency of the persisting headache episodes in this study, years after the accident, were:

Daily	36%
More than once weekly	34%
Once weekly	10%

83% had ongoing treatment, mainly the intake of medication, but very often also physiotherapy and psychotherapy.

"Imaging had been done in all cases and no abnormal findings specifically due to the accident were ever seen."

#### PERSONAL CONCLUSIONS BY THE AUTHOR:

- 1) "There is no doubt that an acceleration and/or deceleration injury in the cervical region is followed not only by neck pain but in many cases also by headaches." "This was the case in 91% of my selected material."
- 2) Most of the post-whiplash chronic headaches "start in the back of the head and are spreading towards the frontal region and behind the eyes."
- 3) Most of the post-whiplash chronic headaches are bilateral.
- 4) Most of the post-whiplash chronic headaches are accompanied by symptoms and signs of a disturbance of the neck.

5) In post-whiplash syndrome, the "headaches tend to be long lasting."

## DISCUSSION

"Several patients with persistent headaches had a normal range of neck motion, which did not correspond to the experience of other authors."

The long duration of residual symptoms in this study are not an exception; another study (2002) showed that "half of the patients with neck complaints following motor vehicle accidents still complained about symptoms, including headaches, 17 years after the accident." **[Important]**

Most studies "blame the cervical spine and its joints and ligaments" for post-whiplash chronic headaches.

Studies have described headaches in patients with known cervical spine pathology before the mechanism of whiplash was known (1920s).

Studies have shown that surgery of the lower spine can relieve headaches, often with good or excellent results, in 88% of patients. **[Important]**

Others have noted "a large number of patients with a disc problem in the cervical spine had headaches that disappeared after successful neurosurgical treatment of their disc."

It has been shown that whiplash trauma can injure the ligamentum flavum, annulus fibrosus, anterior longitudinal ligament, capsules of the facet joints, and the muscles of the neck, producing small "tears of muscle fibers, small haemorrhages and scars." **[Fibrosis of Repair]**

"Sensory fibres of the neck tissue could have been torn by the same mechanism. Since we know that the sensory cells of the first two cervical segments are located in the caudal part of the trigeminal nucleus, this could explain why afferent stimuli from these fibres could be attributed to the cephalic trigeminal region and the pain therefore projected to the skull and other structures of the head."

"In the classification of the International Association for the Study of Pain (IASP) cervicogenic headache had already been included in the classification of chronic pain." **[Important]**

"My personal material permits to conclude that headache exists after acceleration injury to the cervical region."

There is no evidence based successful treatment for post-whiplash chronic headache.

## KEY POINTS FROM DAN MURPHY

- 1) Headaches due to changes in the cervical spine have been noted in the medical literature for 80 years, since 1926.
- 2) "Cervicogenic headache has now been formally accepted by the community of the world's most respected headache specialists."
- 3) "There is no good evidence that ongoing litigation, with settlement pending, is associated with prolongation of [post-whiplash] headache."
- 4) In chronic post-whiplash headaches, neck pain is nearly always present.  
**[Important]**
- 5) Most patients with chronic post-whiplash headaches suffer from daily headaches.
- 6) Most patients with chronic post-whiplash headaches take drugs for their symptoms.
- 7) "There is no doubt that an acceleration and/or deceleration injury in the cervical region is followed not only by neck pain but in many cases also by headaches." "This was the case in 91% of my selected material."
- 8) Most of the post-whiplash chronic headaches "start in the back of the head and are spreading towards the frontal region and behind the eyes."
- 9) Most of the post-whiplash chronic headaches are bilateral.
- 10) In post-whiplash syndrome, the "headaches tend to be long lasting."
- 11) Most studies "blame the cervical spine and its joints and ligaments" for post-whiplash chronic headaches, but other sources for the pain could include the ligamentum flavum, annulus fibrosus, anterior longitudinal ligament, facet capsules, neck muscle scar tissue, and upper cervical sensory input into the trigeminal nucleus.
- 12) Lower cervical disc problems can cause headaches.
- 13) "My personal material permits to conclude that headache exists after acceleration injury to the cervical region."