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Headaches of Cervical Origin

By Moses Sweis

One of the most common symptoms in today's society is headache, for which some 42 million Americans seek care each year.¹ The type of treatment they receive should be highly dependent on the type of headache they have, to ensure the utmost success in relieving the headache without prolonging the pain and extra cost of erroneous treatment. To determine the origin of the headache is one of the most controversial and difficult procedures to perform. One part of this problem is the symptoms patients present with: throbbing pain; nausea; phonophobia; photophobia; vertigo; and neurological symptoms. These symptoms can be found with almost all types of headaches (migraine, cluster, muscle tension and cervicogenic).^{2,3}

One type of headache that is most overlooked and misdiagnosed, especially by MDs, is cervicogenic. According to Michael Hubka, DC, et al., "cervicogenic headache is the most common headache encountered in clinical practices."² To help with its diagnosis, I will devote the rest of this paper to the mechanisms and symptoms of cervicogenic headache.

Cervicogenic headache is defined as pain perceived as arising in the head, but whose actual source lies in the cervical spine.⁴ The most important cause of this headache is mechanical dysfunction or chronic hypomobility (fixation) of the occipitoatlanto area and the rest of the cervical spine.³ Since the vertebral arteries pass through the transverse foramina of the cervical vertebrae, any dysfunction would irritate these arteries and possibly decrease the blood supply to the head and cause a headache.

Secondly the trigeminal (Vth) cranial nerve has connections with the upper cervical nerve roots C1, C2, C3,4,5. Because of these interconnections, "the actual source of the information is ambiguous, whereupon the brain, relying on familiarity with the more accustomed input, interprets the pain as arising from the trigeminal field and not from the neck."⁴ Therefore, any pain produced by structures innervated by the C1-C3 nerves (esp. sensory part), will be perceived as arising from the "trigeminal area" of the head. Structures such as atlanto-occipital and lateral atlantoaxial joints, the prevertebral muscles, trapezius and the

sternocleidomastoid muscles have sensory innervations from C1-C3.⁴

Thirdly, other causes of this type of headache could include cervical spondylosis, uncovertebral arthrosis, rheumatoid arthritis, trigger points in the cervical muscles, and even improper neck position during sleep.^{4,5,6}

The signs and symptoms the patient presents with are of many types. As I stated earlier, the ones that resemble other causes of headache (like migraine) are severe and throbbing pain, nausea, phonophobia and photophobia. The signs and symptoms that could point towards cervicogenic type, include lower pressure pain threshold as measured by an algometer instrument.⁷ Pain that starts in the occipital region and spreads anteriorly towards the frontal area. Intensity fluctuates from mild, moderate to severe and occurs daily. The headache may be exacerbated by head and neck movement. "The most universally accepted finding in the cervical spine in cervicogenic headache sufferers is suboccipital tenderness upon palpation."³

This is not an exhaustive list of causes, signs and symptoms of cervicogenic headache, but only a brief summary to help the reader understand the important role the neck plays in causing headaches. Each patient should be treated as a unique individual and a thorough examination should be performed to obtain the origin of the pain to apply the proper treatment. The best treatment for cervicogenic headaches known to date, as stated by Hubka, Whittingham, Vernon, Gemmell et al.,) is the chiropractic technique (adjustment).

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