Cervicogenic Headache

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Cervicogenic headache: unilateral occipital, temporal or frontal lobe headache caused by referred pain from the upper cervical spine

Risk factors:

- Whiplash injury
- Neck strain
- Chronic neck spasm
- Chronic forward head posture
- Weight lifting
- Cervical spondylosis

Pathophysiology:

- C1-C3 nerves relay pain signals to the nociceptive nucleus of the head and neck → causes referred pain to the occiput/eyes
- Nociceptive nucleus receives sensory signals from the trigeminal nerve as well as the C1-C3 spinal nerves
- Any structure innervated by the C1–C3 spinal nerves (vertebrae, infrahoid muscles, facet joints) could be the origin of pain for a cervicogenic headache

Presentation

- Unilateral pain begins in the neck & radiates to the occiput, frontal or temporal lobe
- Pain severity is moderate to severe - rarely excruciating
- Absence of sensitivity to light and noise
- Reduced neck ROM (confirmed by flexion-rotation test)
- Visible forward head posture +/- rounding of the shoulders at rest

Assessment

- Imaging of the cervical spine is not recommended
- May observe weakness of deep neck flexors during endurance testing
- Tenderness on palpation of C2 & C3 spinous processes
- Presence of myofascial trigger points in the trapezius, scalenes & suboccipital extensor muscles
- May observe atrophy of the suboccipital extensor muscles
- Clinical Pearl: A useful way to confirm if a patient has cervicogenic headache is to ask if any neck movements aggravate the headache or if an increase in the neck pain causes an increase in the headache severity

Management

- Patient education - provide a simple explanation on the cause of cervicogenic headache, prognosis, advice regarding posture in sitting/standing and general management principles
- Daily muscle stretching - the post-isometric relaxation (PIR) technique can reduce tightness and trigger point pain. PIR is performed by: 1) passively lengthening the muscle, 2) the patient lightly contracts (10-20% of maximum) the muscle against resistance for 5 seconds, 3) Relax the muscle and repeat the cycle for a total of 5 repetitions
- C1-C2 Self-sustained Natural Apophyseal Glide (SNAG) - can be completed with a towel alongside exercise
- Strengthening exercise - focus on strengthening the deep neck flexors in different positions eg. supine/standing
- Postural correction - provide regular cues to avoid forward head postures & rounding of the shoulders
- Medical management: cervical nerve root block, muscle relaxant (diazepam), tricyclic antidepressant (amitriptyline)

Want to learn more?

With AcePhysio the learning journey doesn't stop here! Take a look at our further reading recommendations below to become an expert in Cervicogenic Headache:

1. Page P. Cervicogenic headaches: an evidence-led approach to clinical management. Int J Sports Phys Ther. 2011;6(3):254-266.
2. Gema Bodes-Pardo et al.; Manual treatment for cervicogenic headache and active trigger point in the sternocleidomastoid muscle: a pilot randomized clinical trial; Journal of Manipulative and Physiological Therapeutics Volume 36, Number 7; 2013
3. Al Khalili Y, Ly N, Murphy PB. Cervicogenic Headache. [Updated 2022 Mar 9]. In: StatPearls [Internet]. Treasure Island (FL): StatPearls Publishing; 2022 Jan-. Available from: https://www.ncbi.nlm.nih.gov/books/NBK507862/