Persistent Facet Joint Pain After Vestibular Rehabilitation Successfully Treated with Cervical Radiofrequency Ablation

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Case report

A 30-year-old male with myofascial pain syndrome presented with neck pain for 1 year, with no known trauma. He reported that over the past year, he began physical therapy for treatment of benign paroxysmal positional vertigo (BPPV). His BPPV resolved, but he developed neck pain, especially during Epley maneuvers.

He denied radiation into the extremities, though felt the pain radiated to the occipital region occasionally. The pain was constant and associated with cervical paraspinal muscle spasm.

Physical therapy for cervicalgia and twice weekly acupuncture helped minimally. Trigger point injections and botulinum toxin injections to bilateral trapezius, splenius, sternocleidomastoid, and rhomboids provided some temporary relief, but pain returned.

Examination

He denied falls, weakness, hand clumsiness, or bowel/bladder incontinence. He had full range of motion of his neck with normal motor exam, sensory exam, and reflexes. He had cervical paraspinal muscle spasm and pain with facet loading bilaterally.

Cervical MRI

Early multilevel degenerative disc disease and minimal disc bulges at C3-4, C4-5, and C6-7. No evidence of disc protrusion, central canal stenosis, neural foraminal stenosis, or facet arthropathy.

Interventional course

The patient underwent two right C4, C5, C6 medial branch blocks, experiencing substantial temporary relief after each. Following confirmatory diagnostic blocks, cervical radiofrequency ablation provided additional pain reduction. He experienced greater relief on the right side compared to the left and may benefit from repeat radiofrequency ablation in the future.

CLINICAL TAKEAWAY

Persistent neck pain after vestibular rehabilitation warrants consideration of a facet pain generator

Two medial branch blocks provided substantial temporary relief, followed by additional pain reduction after cervical RFA.

Clinical implications

Persistent neck pain after vestibular therapy should prompt consideration of cervical facet-mediated pain in the differential diagnosis, even in younger patients without significant degenerative imaging findings.

Cervical medial branch blocks and RFA may represent effective treatment options in carefully selected patients with refractory facetogenic pain arising after repetitive cervical positional maneuvers.

Background

BPPV is commonly treated with canalith repositioning maneuvers such as the Epley maneuver.[1] These require repetitive cervical extension, rotation, and lateral flexion. While generally considered safe and well tolerated, these maneuvers may place mechanical stress on the cervical facet joints and surrounding paraspinal musculature.

Discussion

This case highlights a patient who developed chronic axial neck pain temporally associated with repeated Epley maneuvers performed during vestibular physical therapy. Despite extensive conservative treatment, his symptoms persisted.

The patient experienced substantial temporary relief following dual diagnostic cervical medial branch blocks, supporting a diagnosis of facet-mediated pain despite minimal radiographic evidence of facet arthropathy. This underscores the known discordance between imaging findings and symptomatic cervical facet pain.[2]

Clinicians performing vestibular rehabilitation maneuvers should remain aware of the potential for cervical musculoskeletal injury, particularly in patients with pre-existing neck pain, myofascial dysfunction, or limited cervical stability.

Further study is warranted to better characterize the incidence of cervical facet irritation following vestibular rehabilitation maneuvers and to identify patients at increased risk for developing chronic cervical pain after BPPV treatment.

References

1. Bhattacharyya N, Gubbels SP, Schwartz SR, et al. Clinical Practice Guideline: Benign Paroxysmal Positional Vertigo (Update). Otolaryngol Head Neck Surg. 2017;156(3_suppl):S1-S47. doi:10.1177/0194599816689667.

2. Hurley RW, Adams MCB, Barad M, et al. Consensus practice guidelines on interventions for cervical spine (facet) joint pain from a multispecialty international working group. Reg Anesth Pain Med. 2022;47(1):3-59. doi:10.1136/rapm-2021-103031.