

Inter-Relating Migraine-Related Neck Pain with Musculoskeletal Dysfunction in the Cervical Spine

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Introduction

Neck pain is frequently associated with migraine and tension-type headaches; however the literature is split on whether this neck pain is a symptom of the headache or is linked to cervical musculoskeletal dysfunction. From a scientific and clinical practice standpoint, clarification is critical for ideas about the pathophysiology of these headaches and their variants, as well as for decisions about the suitability of local neck therapies.

The reasons for the discrepancies could be related to participant selection in headache studies and/or the criteria used to determine the presence of cervical musculoskeletal dysfunction. First, stricter inclusion criteria and reporting of headache characteristics of research participants are proposed as ways to acquire a clearer picture of migraine and tension-type headache-related neck pain. Second, pain sensitivity and the presence of neck tenderness/trigger points should not be used as assessments because they are not specifically linked to a musculoskeletal disease. Tests of musculoskeletal dysfunction should be used instead. Third, the results and interpretations of single impairment/dysfunction assessments or tests might be misleading and do not accurately reflect the presentation of cervical musculoskeletal problems. Rather, a typical presentation comprises interconnected alterations in cervical movement, segmental joint function, and muscle function at a fundamental level [1,2]. According to research published in the journal *Headache*, the presence of neck discomfort is not always symptomatic of cervical musculoskeletal dysfunction in persons who suffer from migraines.

In migraines, neck pain is a common symptom. Despite the lack of data to support the efficacy of local neck therapy for migraines, it is widely recommended. Misdiagnosis of cervicogenic headache has irritated neurologists, as it could lead to delays in adequate migraine treatment. To fill the vacuum in knowledge, a group of Australian researchers conducted a cross-sectional, single-blinded study to determine the frequency of cervical musculoskeletal dysfunction in migraine patients with neck discomfort. They also wanted to see if pain hypersensitivity impacts cervical musculoskeletal function in this group of patients [3].

The study had a total of 177 participants, including 124 migraine patients, 21 patients with idiopathic neck discomfort, and 32 healthy control patients. Patients with migraines reported neck pain in 89 percent of cases.

Chronic migraine patients showed more neck impairment ($P=0.025$) and neck pain intensity ($P=0.049$) than episodic migraine patients. Individuals with chronic migraine showed significantly worse neck disability and neck pain intensity ($P=0.005$ and $P=0.049$, respectively) than patients with idiopathic neck pain.

The researchers discovered two well-separated clusters of cervical musculoskeletal function using partitioning around medoids and Ward's hierarchical agglomerative clustering approaches. In the first cluster, there were 108 patients, and in the second cluster, there were 69 individuals. Cluster 1 contained all healthy controls, while cluster 2 had all participants with idiopathic neck pain; cluster 1 contained

61 percent of migraine patients, while cluster 2 contained 39 percent of migraine patients. Cluster 1 contained all migraine patients who did not have neck discomfort; nonetheless, patients with chronic and episodic migraine were present in both groups [4].

There were no significant changes in headache or neck pain characteristics or impairment between the musculoskeletal clusters. Furthermore, pain hypersensitivity scores were not significantly associated to a musculoskeletal cluster, implying that migraine pain hypersensitivity is unrelated to musculoskeletal dysfunction. The study's findings highlighted the "need for a personalized skilled assessment of cervical musculoskeletal function to discern a central versus peripheral origin of neck discomfort, or a combination of both," according to the authors [5].

"Do not rely solely on pain or tenderness, which frequently reflects the general pain hypersensitivity found in migraine sufferers. "In future clinical trials on the efficacy of neck therapies, people with migraine with neck pain should not be treated as a homogeneous group," the researchers stated.

References

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Received August 09, 2021; Accepted August 23, 2021; Published August 31, 2021

Citation: Goyal A (2021) Inter-Relating Migraine-Related Neck Pain with Musculoskeletal Dysfunction in the Cervical Spine. *J Nov Physiother* 11: 479.

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