Journal of Novel Physiotherapies
ISSN: 2165-7025

Editorial Open Access

Dry Needling: An Alternative Treatment Modality for Cervicogenic Headache

Deborah A. George*

Department of Physical Therapy, University of Findlay, Findlay, Ohio, USA

Editorial

Headache (HA) has plagued approximately 1 out of every 6 American, accounting for 3% of all emergency visits, each year [1]. Thirty two percent of women and 21.3% of men have reported a lifetime prevalence of migraine [2]. It is a common reason for utilization of sick-days, over-use of medications, financial hardship, and decreased quality of life among HA sufferers. For example, direct medical costs were estimated at one billion dollars for the treatment of migraine HA [3]. In addition, indirect costs were estimated at 13 billion dollars per year due to missed workdays and impaired work [3]. These costs have encouraged allied health (AH) professionals to seek alternative treatment modalities.

Headache can be classified as primary with the cause of the pain coming from specific structures in the head or secondary, whereby musculoskeletal structures in the body stimulate head pain. The most common types of HA are tension HA, migraine HA and trigeminal autonomic cephalalgias [4]. Careful assessment of the cause of an individual's HA has led AH professionals to determine the most effective, efficient treatments. If myofascial pain, tenderness, and/or trigger points are discovered through palpation, then dry needling could be an important part of the individual's treatment [5,6]. Concerning areas for cervicogenic HA would be the trigger points of suboccipital and upper trapezius muscles.

Although the term, dry needling (DN) was first coined in the 1940s by Dr. Janet Travell, its usage by trained AH professionals did not become popular until the 1980s [5]. Authors have discussed three models of application for DN: a. a radicular model; b. a spinal segmental sensitization model; and c. a trigger point model [5,6]. The trigger point model has been most popular amongst the AH professionals in the United States. It involves the insertion of a fine, solid filiform needle into the trigger point area, either superficially or deep. Application of DN may be completed either dynamically with slow, steady, pistoning motion or statically by leaving the needle in place for 30-60 seconds up to 2-3 minutes [5]. The static technique could also be augmented with intramuscular electrical stimulation [5]. This treatment is often followed by stretching the affected muscle, as well as neuromuscular re-education. Eventually strengthening the concerned musculature would be added.

Dry needling has become an effective part of a multi-modal treatment plan for various musculoskeletal pathologies [7-9]. However, it is a relatively new intervention for the treatment of cervicogenic HA. Recently, AH professionals are investigating the efficacy of this treatment modality. Out of the reviewed studies on the use of DN with cervicogenic HA, all indicated positive outcomes, such as decrease in number of headaches [10]; decrease in pain intensity [10-12]; increased active neck range of motion [11,14]; and decreased pressure sensitivity [13,14]. Only minimal improvement in functionality [11,12,14] (e.g., neck disability index) and quality-of-life [11] was found.

All of the studies concluded that there is a need for more conclusive evidence for the efficacy of DN, especially regarding the long- term effects of this modality [10-14]. Further discovery of the most effective application of DN is also indicated, such as the use of ischemic compression prior to DN, electrical stimulation with DN, dynamic pistoning versus static positioning, and superficial versus deep insertion. The future of DN as treatment modality for cervicogenic HA is exciting and has great potential to become the treatment of choice for the trained professional.

References

1. Burch R, Rizzoli P, Loder E (2018) The prevalence and impact of migraine and severe headache in the united states: Figures and trends from Government Health Studies. Headache: The Journal of Head and Face 58(4): 496-505.
2. Hagen K, Åsberg A, Uhlig B, Tronvik E, Brenner E, et al. (2018) The epidemiology of headache disorders: A face-to-face interview of participants in $HUNT_4$. J Headache Pain 19(1): 1-6.
3. Hu X, Markson L, Lipton R, Stewart W, Berger M (1999) Burden of migraine in the United States: disability and economic costs. Arch Intern Med 159(8): 813-818.
4. Headache Classification Committee of the International Headache Society (IHS) (2018) The International Classification of Headache Disorders, 3rd edition. Cephalalgia 38(1) 1-211.
5. Unverzagt C, Berglund K, Thomas JJ (2015) Dry needling for myofascial trigger point pain: A clinical commentary. Int J Sports Phys Ther 10(3): 402-418.
6. Dommerholt J (2006) Dry needling - Peripheral and central considerations. J Man Manip Ther 19(4): 223-227.
7. Furlan AD, Van Tulder MW, Cherkin DC, Tsukayama H, Lao L, et al. (2005) Acupuncture and dry-needling for low back pain: an updated systematic review within the framework of the cochrane collaboration. Spine 30(8): 944-963.
8. Hadizadeh M, Tajali S, Moghadam B, Jalaie S, Bazzaz M (2017) Effects of intramuscular electrical stimulation on symptoms following trigger points; a controlled pilot study. Journal of Modern Rehabilitation 11(1): 31-36.
9. Rainey C (2013) The use of trigger point dry needling and intramuscular electrical stimulation for a subject with chronic low back pain: A case report. Int J Sports Phys Ther 8(2): 145-161.
10. Bond B, Kinslow C (2015) Improvement in clinical outcomes after dry needling in a patient with occipital neuralgia. J Can Chiropr Assoc 59(2): 101-110.
11. Cagnie B, Castelein B, Pollie F, Steelant L, Verhoeyen H, et al. (2015) Evidence for the use of ischemic compression and dry needling in the management of trigger points of the upper trapezius in patients with neck pain: A systematic review. Am J Phys Med Rehabil 94(7): 573-583.
12. Gattie E, Cleland J, Snodgrass S (2017) The effectiveness of trigger point dry needling for musculoskeletal conditions by physical therapists: A systematic review and meta-analysis. J Orthop Sports Phys Ther 47(3): 133-149.

***Corresponding author:** Deborah A. George, Department of Physical Therapy, University of Findlay, Findlay, OH, USA, Tel: 419-434-5531; E-mail: george@findlay.edu

Received March 22, 2021; **Accepted** March 23, 2021; **Published** March 30, 2021

Citation: George DA (2021) Dry Needling: An Alternative Treatment Modality for Cervicogenic Headache. J Nov Physiother 11: e107.

13. Llamas-Ramos R, Pecos-Martín D, Gallego-Izquierdo T, Llamas-Ramos I, Plaza-Manzano G, et al. (2014) Comparison of the short-term outcomes between trigger point dry needling and trigger point manual therapy for the management of chronic mechanical neck pain: A randomized clinical trial. J Orthop Sports Phys Ther 44(11): 852-861.

14. Sedighi A, Nakhostin A, Naghdi S (2017) Comparison of acute effects of superficial and deep dry needling into trigger points of suboccipital and upper trapezius muscles in patients with cervicogenic headache. J Body Mov Ther 21(4): 810-814.