International
Journal of Medical and Exercise Science
(Multidisciplinary, Peer Reviewed and Indexed Journal)

ORIGINAL ARTICLE

EFFICACY OF DRY NEEDLING TECHNIQUE VERSUS CERVICAL MANIPULATION TECHNIQUE ON PATIENTS WITH MIGRAINE

Search engine:
www.ijmaes.org

Jibi Paul[1], D. Chengi Kousalya[2]

Author:

[1]Professor, Faculty of Physiotherapy, DR. MGR. Educational and Research Institute, Deemed to be University, A.C.S. Medical College and Hospital Campus, Chennai, India

Corresponding Author:

[2]MPT Graduate, Faculty of Physiotherapy, DR. MGR. Educational and Research Institute, Deemed to be University, A.C.S. Medical College and Hospital Campus, Chennai, India

Mail Id: chengikousalya@gmail.com

ABSTRACT

Background of the study: Migraine is serious health problem in 15% of general population. The patients with migraine exhibited active Trigger Points in their neck extensor muscles. Dry needling is a treatment using a thin filament sterile needle to puncture skin and create tiny lesions in a muscle, tendon, to help restore normal physiology function, and reduce pain. Needling has applications for myofascial pain, chronic pain, headache, migraine. Cervical Manipulation Technique has been used to reduce pain and improve range of motion and used in the treatment of patients with head and neck disorders, including neck pain and stiffness, muscle-tension headache, and migraine. The aim of this study is to compare the effectiveness of dry needling technique versus cervical manipulation technique on patients with migraine. **Methodology:** 30 patients were randomly divided into two groups; fifteen patients in the experimental group-A received cervical manipulation technique (3 times/week) and fifteen patients in the experimental group-B received Dry needling technique. The VAS and NDI were used as outcome measures. **Result:** Comparing between Group A and Group B showed significant difference in effectiveness on pain and Neck disability with P value >0.0001 among patients with migraine. Group B with Dry needling technique found more effective than Group A with cervical manipulation technique with mean difference of (2.867) and (11.40) over (2.267) and (10.47) respectively. **Conclusion:** Dry needling technique group is more effective over cervical manipulation technique on enhancing on pain and neck disability. Therefore, this study concludes that Dry needling technique is an effective intervention for migraine patients.

Key words: Visual analog scale, Neck disability index,cervical manipulation technique,Dry needling technique, Trigger points.

Received on 18th July 2022, Revised on 15th Aug 2022, Accepted on 25th Aug 2022
DOI:10.36678/IJMAES.2022.V08I03.003

INTRODUCTION

Headache is crucial migraine problem; it is quite possibly of the most well-known neurological problem in overall public. The pervasiveness is around 10% and differs little worldwide1.Migraine most frequently starts at pubescence and most effects in age somewhere in the range of 35 and 45 years. It is more normal in ladies, for the most part by an element of around 2:1, in light of hormonal impacts. Headache is an extreme pounding migraine with sickness or spewing related with photophobia that is bothered by routine actual work, for example, strolling or climbing stairs[1,2].

Headache regularly endures between 4 hours to 72 hours and has one-sided head ache[3]. Numerous headache distributions, the system of headache isn't yet surely known 4. The system of headache is accepted to include the trigeminal cervicogenic complex, which gets nociceptive data through afferent projections from the dura matter in huge intracranial vessels5. Not all assaults answer intense therapy. A few patients with headache have contraindications to triptans like vascular infections or pregnancy, and triptans are not powerful during the air period of a headache assault[17].

In one-sided headache, dynamic TrPs in the upper trapezius (30%), sternocleidomastoid (45%) and temporalis (40%) muscles were found simply ipsilateral to headache assaults when contrasted with the non-suggestive side24.A study directed by Florencio et al showed that patients with headache displayed dynamic Trigger Focuses in the neck extensor muscles[6].

Helpful administration of migraines essentially contains exercise based recuperation and pharmacological approaches. Somewhat recently, there has been a rising interest in the utilization of dry needling for the treatment of migraine as well concerning neck and shoulder torment disorders[8, 9].

Dry needling is a gifted intercession habitually performed by actual specialists, doctors, bone and joint specialists, and acupuncturists for the help of myofascial torment problems. In this method a fine sterile needle is used to enter the skin, subcutaneous tissues, sash, and muscle, fully intent on deactivating Trigger Focuses without the utilization of a sedative[10,11].

When a Trigger Focuses is deactivated, the fine needle is eliminated. It is a productive, simple to-learn-and-carry out method with a generally safe profile[12,13]. Hong (1994) recommended that neighborhood jerk reactions ought to be inspired during dry needling for an effective technique. The hour of use will depend upon the crabbiness of the Trigger Point . Albeit dry needling probably won't change all focal sharpening viewpoints, it is likely that nearby and alluded torment will be decreased, muscle blood stream, oxygenation, examples of muscle enactment, and scope of movement will be improved, and the biochemical climate of Trigger Focuses will be changed[14, 15].

Cervical Control Method is a type of manual treatment used to lessen torment and further develop scope of movement. Cervical Control Procedure has been utilized in the treatment of patients with head and neck issues, including neck agony and firmness, muscle-strain cerebral pain, and headache. It has been proposed that Spinal Control Treatment might actuate the diffuse plunging torment inhibitory framework, whose neurons are situated in the periaqueductal dark matter[16-18]. Then again,

huge heights in plasma beta-endorphin levels have been tracked down 5 minutes after cervical SMT.

The disturbance of agony fit torment cycle is one more proposed instrument through which cervical control procedure could remember migraine intense pain. Vascular, neuronal, and neurovascular speculations have been advanced as the essential component for headaches. The initial two speculations propose an unadulterated vascular or neuronal premise of headache migraine [19, 20].

One neurovascular theory that has describe the trigeminal vascular arrangement of the cerebrum in the essential system of headache migraines. The cervical manipulative treatment could restrain difficult sensation during a headache migraine assault [21].

Aim of the Study: To investigate the comparative effects of Dry needling technique and cervical manipulation technique on pain and neck range of motion among patients with migraine.

Need of the study: Migraine is one of the common causes of headaches, it is a neurovascular disorder. Headache is widely variable in intensity, frequency and duration which associated with neck pain and disability. The peri cranial muscle tenderness and referred pain have been described during attacks as well as during attack-free periods. The presence of trigger points causing migraine-like pain was a common finding. The patients suffered disabling and long-lasting migraine.

METHODOLOGY

This was an experimental type with comparative pre and post type. 30 subjects both male and female were participated in this study. Selected samples on the basis of inclusion and exclusion criteria were randomly divided equally by lottery method in to two experimental groups A and B. Both groups were allocated 15 samples each. The experimental group A was cervical manipulation technique while the experimental group B was dry needling technique.

The study conducted at Outpatient physiotherapy department ACS medical college and hospital, Chennai. Duration of this Study was one month duration (30 days). Both the genders with age group (20- 40 years) patients who had experienced migraine with or without aura with a frequency of 2-8 attacks per month, Moderate pain score of 4-6 in VAS and moderate pain score of 15-24 in NDI subjects and Migraine for at least 1 year before participating in the study were included in this study.

Subjects with Fibromyalgia headache and Medication-overuse headache, history of cervical trauma or surgery, patient with needle phobia, History of untoward reaction to needling (or injection) in the past, patient with Vascular Disease, patient with Diabetes were excluded from this study. Material used in this study was Dry needle and Assessment form. Measurement tool used in this study were Visual analog scale (4-6, moderate pain) and Neck Disability Index (15-24, moderate pain).

Experimental Group A: Cervical Manipulation Technique

The Control procedure used to address the cervical and upper thoracic intervertebral joints. This sort of strategy for change is

basically the same as chiropractic procedure however for certain distinctions in patients' and specialist positions comparative with one another. Intercession term was six meeting/fourteen day. This is a totally effortless interaction. In any case, it ought to be noticed that an uproarious popping sound of the cervical joints might scare the patient or be assumed that there might be a physical issue to the neck. Hence, before the start of the meeting, the specialist clarified for the patients the nature of sounds that might be heard from the neck, and showed that the sounds are not an indication of neck injury.

Patient position-requests that the patient hangs the arms unreservedly from the sides inclining loosened up on the seat. Then, at that point, the specialist took the head in his grasp from the back, pivoting one hand (left or right) up to put his thumb on the parallel side of the C7 vertebra. The other four fingers were spread vertical to the patient's face. The other hand palm covered the patient's temporomaxillary cycle at the pre-auricular area.

The specialist boiled down to a semi sitting position and joined his chest to the seat back. Request that the patient leave his head loose. Here, the patient's head had an outrageous help and the specialist could turn the patient's head dorsolaterally with some pressure with his hand on his temporoparietal district. With pivoting the head to its maximal dynamic development cutoff and afterward applying a speedy delicate power to pass from this breaking point, 'popping' hints of variable tumult had the option to be recognized from the patient's neck relating to the change of the cervical intervertebral joints. The opposite hand positions were applied to control the contralateral intervertebral joints, also.

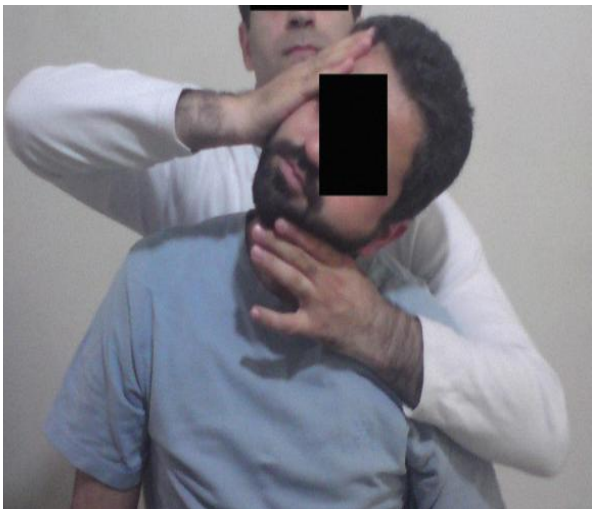


Figure 1. Manipulation of the Cervical Spine

Assessment of head and neck (flexion, augmentation, and pivot developments) scope of-movement when the control, and surveyed for any sort of aggravation or unsettling influences after control. The other control method is incorporate, control of upper thoracic spinal joints. Ask to the patient to keep up with the sitting position and to put two hands on the occipitoparietal part of the head with the fingers joined. A triangle is comprised of the patient's head and neck, his lower arm and arm in each side.

The advisor carried his hands from behind to the patient's front side as though endeavoring to embrace the subject from behind, yet with the subject actually situated. Then, at that point, the specialist got his hands through the previously mentioned three-sided space in each side and set them over the patients' hands. The specialist request that the patient stay loose, then pulled the chest in a regressive and up (posterosuperior) bearing impressive a corresponding strain on back of the head in a contrary course. This made the patient's upper thoracic vertebrae from T1 nearly T4 to deliver in the pedicular joints with a corresponding

'popping' sound. In spite of the fact that it isn't important to hear a popping sound during any of the controls, this was seen to a more prominent or lesser degree.

Figure2. Manipulation of the upper thoracic spine

Experimental Group B: Dry Needling Technique

Consists of trigger point dry needling in particular muscles (Corrugator supercilii, temporalis, sub-occipital, upper trapezius in some patients Sternocleido mastoid muscle). Duration of the intervention is 3 sessions in a week for 2 weeks.

In this concentrate just dynamic TrPs were incorporated. Dynamic TrPs were segregated from idle TrPs by applying strain to a few places and looking at them. As far as palpation techniques, the pincer palpation strategy was utilized for upper trapezius and sternocleidomastoid muscle while the level palpation strategy was utilized for different muscles (temporalis, corrugator supercilii, and sub-occipital). A strain was applied on the all chosen muscles for 10seconds evoked alluded torment. The dynamic TrPs which are most regularly found in the populace who has headache were then chosen for this review.

The patient in recumbent position, the advisor first and foremost cleaned the region with liquor based hand sanitizer. Then, at that point, DN was applied into the dynamic TrPs in corrugator supercilii, temporalis muscle. Sub-occipital, upper trapezius and sternocleidomastoid muscles for these muscles the patient in inclined position. The needle stayed in the trigger focuses for 20 minutes. The DN methodology utilized sterile stain less steel needle therapy needles of 0.25x25mm. DN was applied three times each week for 2 weeks. The patients mentioned not to utilize any pain relieving prescription during the treatment and follow-up periods.

Figure 3. Corrugator Supercilii Muscle

Figure 4. Dry Needling For Temporalis Muscle

Figure 5. Dry Needling For Upper Trapezius Muscle

Figure 6. Dry Needling For Sub Occipital Muscle

Data Analysis and Interpretation

VAS	Mean	Number of Pairs	Mean Diff.	SD, SEM	DF	t	P value	Sig. Diff. (P<0.05)
Pre Test	5.267	15	2.267	0.4577	14	19.18	<0.0001	****
Post Test	3.00			0.1182				

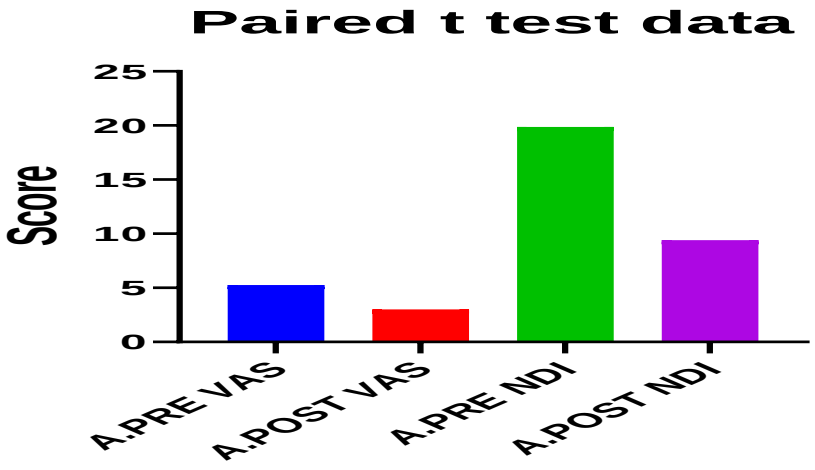
Table 1: Comparison between Pre Test and Post Test Value of Visual Analog Scale within the Group-A.

The above table 1, shows significant difference in VAS on Efficacy of cervical manipulation technique on patients with migraine with P value >0.0001.

NDI	Mean	Number of Pairs	Mean Diff.	SD, SEM	DF	t	P value	Sig. Diff. (P<0.05)
Pre Test	19.87	15	10.47	1.302	14	31.13	<0.0001	****
Post Test	9.400			0.336				

Table 2: Comparison between Pre Test and Post Test Value of Neck Disability Index within Group- A.

The above table 2 shows significant difference in NDI on Efficacy of cervical manipulation technique on patients with migraine with P value >0.0001.



Graph 1: Comparison between Pre Test and Post Test Value of visual analogue scale and neck disability index within the Group- A

VAS	Mean	Number of Pairs	Mean Diff.	SD, SEM	DF	t	P value	Sig.Diff. (P < 0.05)
Pre Test	5.133	15	2.867	0.6399 0.1652	14	17.35	<0.0001	****
Post Test	2.267							

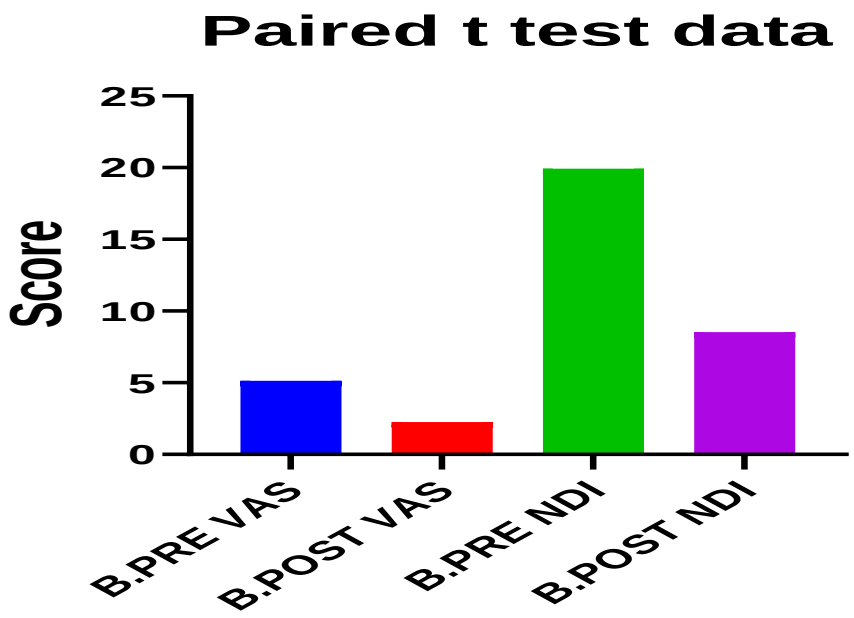
Table 3: Comparison between Pre Test and Post Test Value of Visual Analog Scale within Group-B.

The above table 3 shows significant difference in VAS on Efficacy of Dry needling technique on patients with migraine with P value >0.0001.

NDI	Mean	Number of Pairs	Mean Diff.	SD, SEM	DF	t	P value	Sig.Diff. (P < 0.05)
Pre Test	19.93	15	11.40	1.639 0.4231	14	26.94	<0.0001	****
Post Test	8.533							

Table 4: Comparison between Pre Test and Post Test Value of Neck Disability Index with the Group- B.

The above table 4 shows significant difference in NDI on Efficacy of Dry needling technique on patients with migraine with P value >0.0001.

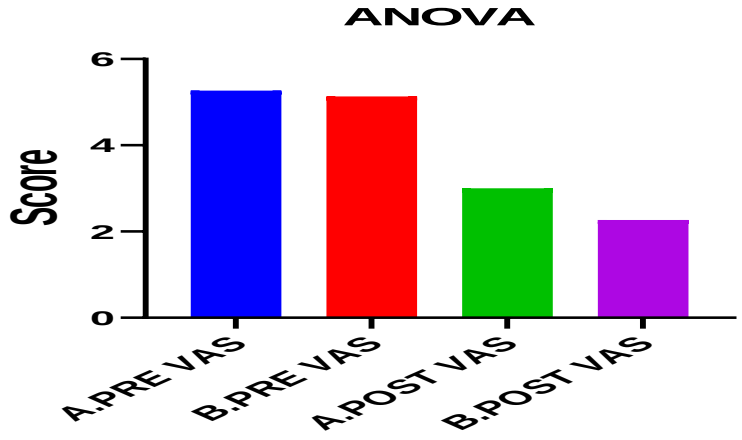


Graph 2: Comparison between Pre Test and Post Test Value of Visual Analogue Scale and Neck Disability Index within the Group- B.

Out come Measures	Group A & B	Test	Mean	Mean Diff.	R Square	F	P value	Sig. diff. (P < 0.05)
VAS	CMT	Pre test	5.267	2.267	0.777	64.94	<0.0001	****
		Post Test	3.00					
	DNT	Pre test	5.133	2.867				
		Post Test	2.267					

Table 5: Comparison of Visual Analog Scale between Group-A and Group-B in Pre and Post Test

The above table 5 shows significant difference on VAS between Group A and B with P value <0.0001.

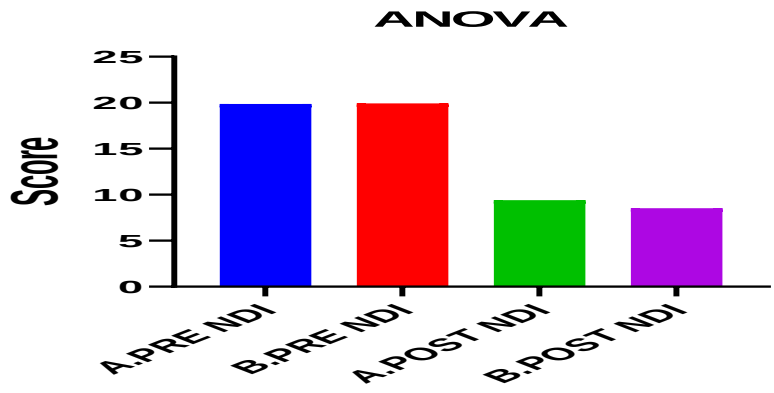


Graph 3: Comparison of Visual Analogue Scale Between Group- A And Group-B In Pre Test And Post Test.

Out come Measures	Group A & B	Test	Mean	Mean Diff.	R Square	F	P value	Sig. diff. (P < 0.05)
NDI	CMT	Pre test	19.87	10.47	0.892	154.0	<0.0001	****
		Post Test	9.400					
	DNT	Pre test	19.93	11.40				
		Post Test	8.533					

Table 6: Comparison of Neck disability Index Between Group-A and Group-B in Pre and Post Test

The above table 6 shows significant difference on NDI between Group A and B with P value <0.0001.



Graph 4: Comparison of Neck Disability Index between Group- A and Group-B In Pre And Post Test

RESULTS

Total 30 participants of patients with migraine were included in the study base on specific selection criteria.

In study pain has reduced with mean difference of 2.267, by with Cervical manipulation technique with P value >0.0001, among patients with migraine.

In study pain has reduced with mean difference of 2.867, by Dry needling technique with P value >0.0001, among patients with migraine.

Neck disability has reduced with mean difference of 10.47, by Cervical manipulation technique with P value >0.0001, among patients with migraine.

Neck disability has reduced with mean difference of, by 11.40, Dry needling technique with P value >0.0001, among patients with migraine.

Comparative study between Group A and Group B showed significant difference in effectiveness on pain and Neck disability with P value >0.0001 among patients with migraine. Group B with Dry needling technique found more effective than Group A with cervical manipulation technique with mean difference of 2.867 and11.40 over 2.267 and 10.47 respectively.

DISCUSSION

This study examined the effects of dry needling technique for migraine patients on pain and neck disability to suggest a proper approach to reduce the intensity of pain in migraine patients. In this study, VAS was used to evaluate the intensity of pain and NDI was used to evaluate the neck disability. After the experiment there was a significant difference in the intensity of pain and neck disability between two groups. The reduced in VAS significantly smaller and NDI was significantly larger in the experimental group B then the group A. Therefore, dry needling technique was effective in reduce the pain and neck disability.

Temporal and suboccipital trigger points eliciting referred migraine like pain is a common feature in patients with migraine, suggesting that peripheral nociceptive sensitization is associated with migraine susceptibility. The fact that both the number of trigger points and pericraneal cutaneous allodynia are frequently observed in patients with chronic migraine seems indicative that frequent and long-lasting migraine attacks can lead to persistent central sensitization.

Trigger points detection in patients with migraine could be useful when applying therapeutic measures directed to reduce peripheral sensitization like acupuncture, needling or botulinum toxin injections; this deserves further investigation[24].The demonstrated in this preliminary study thatcervical spinal massage and manipulation could significantlyreduce the headache pain intensity in acutemigraine attacks. However, future controlled studieswith larger sample sizes are necessary to confirm thefindings of the present study.

Dry Needling is effective and safe in reducing headache frequency, intensity and duration, and increasing HRQoL in patients with chronic tension type headache. However, our results may not be generalized to the population of all people diagnosed with chronic tension type headache. Further trials, particularly those comparing DN to other treatment modalities

The one session of dry needle stimulation induced an increase in blood flow and oxygen saturation in the trapezius muscle in healthy participants, andthese values remained high throughout the 15-minute recovery period. There were no changes in regions distant to the needle site. Further studies in participants with myofascial pain and in specific trigger points are required[15].

Surface electromyography (EMG) was recorded from the superficial flexors (SCM and anterior scalene) and the extensor (SC, UT) muscles bilaterally as participants performed a staged task of cranio-cervical flexion (CCF; 5 contractions representing a progressive increase in CCF range of motion) in 70 women with migraine. The presence of active TrPs in the cervical musculature determines an altered activation of superficial neck and extensor muscles during low-load, isometric CCF contractions in women with migraine.[6]

Ethical clearance: Ethical clearance was obtained from the ethical Institutional Review Board of Faculty of Physiotherapy, Dr. MGR. Educational and Research Institute, Chennai with reference No: MPT(Neuro) - 01/PHYSIO/IRB/2019-2020 approval letter dated 06/01/2020.

Conflicts of Interest: There is no conflict of interest to conduct this study.

Fund for the study: This is self-funded study.

CONCLUSION

Cervical manipulation technique and dry needling technique both showed improvement in reducing pain and neck disability among migraine patients. Dry needling technique group is more effective over cervical manipulation technique on enhancing pain, and neck disability. Therefore, this study concludes that dry needling technique is an effective intervention for migraine patients.

REFERENCES

1. Stovner L, Hagen K, Jensen R, et al (2007). The global burden of headache: a documentation of headache prevalence and disability worldwide. Cephalalgia.; 27(3); 193–210.
2. Borodic GE, Acquadro MA (2002). The use of botulinum toxin for the treatment of chronic facial pain. J Pain, 3; 21–7.
3. Dowson A. (2015). The burden of headache: global and regional prevalence of headache and its impact. Int J Clin Pract.; 69; 3-7.
4. Saunders BJ, Aberkorn IS, Nye BL (2019). Laboratory investigation in CDH. In: Green M, Cowan R, Cham FF, editors. Chronic headache. Switzerland: Springer ; P.169–83.
5. Florencio LL, Ferracini GN, Chaves TC, Palacios-Ceña M, Ordás-Bandera C, Speciali JG, Falla D, Grossi DB, Fernández-de-las-Peñas C (2017). Active trigger points in the cervical musculature determine the altered activation of superficial neck and extensor muscles in women with migraine. Clin J Pain; 33; 238-45.
6. Katsarava Z, Holle D, Diener HC (2009). Medication overuse headache. Curr Neurol Neurosci Rep.; 9 (2); 115-119.
7. Fernández-de-las-Peñas C, Cuadrado ML. (2016) Physical therapy for headaches. Cephalalgia; 36; 1134-42.
8. Fernández-de-las-Peñas C, Cuadrado ML (2016). Dry needling for headaches

presenting active trigger points. Expert Rev Neurother.16; 365–6.

9. Abreu Venâncio R, Guedes Pereira Alencar F, Zamperini C (2008). Different substances and dry-needling injections in patients with myofascial pain and headaches. CRANIO®. 26; 96-103.
10. Brady S, McEvoy J, Dommerholt J, Doody C (2014). Adverse events following trigger point dry needling: a prospective survey of chartered physiotherapists. J Man Manip Ther. 22; 134-40.
11. Liu L, Huang Q-M, Liu Q-G, Ye G, Bo C-Z, Chen M-J, Li P (2015). Effectiveness of dry needling for myofascial trigger points associated with neck and shoulder pain: a systematic review and meta-analysis. Arch Phys Med Rehabil.; 96:944–55.
12. Hong C-Z (1994). Lidocaine injection versus dry needling to myofascial trigger point. The importance of the local twitch response. Am J Phys Med Rehabil.73; 256-63.
13. Cagnie B, Barbe T, De Ridder E, Van Oosterwijck J, Cools A, Danneels L (2012). The influence of dry needling of the trapezius muscle on muscle blood flow and oxygenation. J Manip Physiol Ther.; 35; 685-91.
14. O lesen J, Diener HC, Schoenen J, et al (2004). No effect of eletriptan administration during the aura phase of migraine. Eur J Neurol.; 11(10); 671–677.
15. Vicenzino B, Collins D, Benson H, et al (1998). An investigation of the interrelationship between manipulative therapy-induced hypoalgesia and sympatho-excitation. J Manipulative Physiol Ther.; 21(7); 448-453.
16. Maigne JY, Vautravers P (2003). Mechanism of action of spinal manipulative therapy. Joint Bone Spine.70 (5); 336–341.
17. Dodick DW (2008). Examining the essence of migraine–is it the blood vessel or the brain? A debate. Headache; 48(4):661–667.
18. Moskowitz MA (1991). The visceral organ brain: implications for the pathophysiology of vascular head pain. Neurology. 41(2(Pt 1)); 182–186.
19. Emily R. Howell, BPHE (Hons), (2011) DC* the association between neck pain, the Neck Disability Index and cervical ranges of motion: a narrative review J Can Chiropr Assoc. Sep; 55(3): 211–221.
20. C Fernández-de-las-Peñas, ML Cuadrado, JA Pareja (2006). Myofascial Trigger Points, Neck Mobility and Forward Head Posture in Unilateral Migraine. Volume: 26 issues: 9, page(s): 1061-1070.
21. David M Kietrys 1, Kerstin M Palombaro, Jeffrey S Mannheimer (2014). Dry needling for management of pain in the upper quarter and cranio facial region. Curr Pain Headache Rep.18 (8):437
22. Hamed Bermasa, Nazanin Najafib, SaeedeMasafic (2011). The purpose of current study is to compare personality characteristic of the people suffering from migraine headache and personality characteristic of healthy people. Procedia-Socialand BehavioralSciences, 30; (2011); 1183–1190.
23. Ferracini,Gabriela Natália MD; Chaves, Thaís Cristina PhD (2016). Relationship between Active Trigger Points and Head/Neck Posture in patients with Migraine American Journal of Physical Medicine & Rehabilitation: Volume 95 - Issue 11 - p 831-839.
24. Danit Tali BPT, Itay Menahem BPT, Elisha Vered BPT, MEd, Leonid Kalichman PT, PhD(2014).Uppercervicalmobility,posturea ndmyofascialtriggerpointsinsubjectswithepi sodicmigraine:Case- control study. Journal

of Body work and Movement Therapies volume18, Issue4, Pages 569-57.

25. Lidiane Lima Florencio, MD, Maria Carolina Merli Giantomassi, Gabriela Ferreira Carvalho, MD, Maria Cláudia Gonçalves, PhD, FabíolaDach, PhD,(2015). Generalized Pressure Pain Hyper sensitivity in the Cervical Muscles in Women with Migraine. Pain Medicine, Volume16, Issue8, Pages1629-1634.
26. Younes Jahangiri Noudeh, MD1, *Nasibeh Vatankhah, MD, and Hamid R. Baradaran, MD, PhD2 (2012). Reduction of Current Migraine Headache Pain Following Neck Massage and Spinal Manipulation, Int J Ther Massage Body work. 5(1):5–13.
27. 37.G.D'Annunzio"University;Ce.S.I.,"G.D'Annunzio"Foundation,Chieti,Italy.(2007),Contributionof Myofascial Trigger Points to Migraine Symptoms. The Journal of Pain Volume 8, Issue11, Pages 869-87.
28. E. Hurwitz, P.Aker, P.Shekelle(1996). Manipulation and Mobilization of the Cervical Spine: ASystematic Review of the Literature. Spine:Volume21-Issue15-p1746-1759.

Citation:
Jibi Paul, D. Chengi Kousalya (2022). Efficacy of dry needling technique versus cervical manipulation technique on patients with Migraine , ijmaes; 8 (3); 1330-1342.