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Original Article

Comparison of Positional Release Technique and Ischemic Pressure on Pain and Headache Disability in Cervicogenic Headache

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ABSTRACT

Cervicogenic headache may imitate those usually connected through essential headache problems**. Objective:** To determine the effects of ischemic compression and positional release procedure on pain and Headache Disability Index in Cervicogenic headache. **Methods:** Data were collected from Physiogic Physiotherapy Clinic Lahore, for 6 months. Quasi Experimental study was conducted on 18 patients of Cervicogenic headache. All were randomly allocated to ICT group and PRT group, both groups were treated for 12 sessions in 4 weeks. NPRS, HDI were used to measure the treatment effect before and after treatment of 12 sessions in 4 weeks. Data was analyzed by SPSS 21. **Results:** There were 9(50.0%) participation with mean of 26.22 and SD 2.90 in group A and 9(50.0%) participants with mean of 24.55 and SD 2.55 in group B. Across the gathering correlation of VAS, KOOS AND AKPS with mean difference and standard p value of pre and post treatment values and within group comparison of VAS, KOOS AND AKPS showed significant difference in Group A as compared to group B. **Conclusions:** Result showed that significant difference found between the mean values of both technique after treatment (Post-Treatment) in HDI & NPRS in the favor of PRT because there is more variation in mean of PRT as compared to IC technique.

INTRODUCTION

Cervicogenic headache may imitate those usually connected through essential headache problems, for example, stiffness type pain, headache, or hemi crania continua, and thus, recognizing among these headache types can be troublesome. The pervasiveness of Cervicogenic migraine in everybody is surveyed to be some place in the scope of 0.4% and 2.5%. Regardless, in torment association focuses, the commonness is as high as 20% of patients with continuous migraine [1]. Patients with Cervicogenic migraine have indicated critical declines in close to home fulfillment assessments that resemble those in patients with cerebral pain and strain type migraine when differentiated and control subjects. In any case, they display the best space in territories of physical working when stood out from bunches with other migraine issues [2-4]. The (ICHD) International grouping Of Headache Disorders distinguishes and classifies in excess of a hundred various types of headaches in a logical, hierarchal framework. Much more significant, it has given unequivocal analytic rules to the whole headache issues

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recorded. The ICHD immediately turned out to be all around acknowledged, and analysis of the grouping has been minor comparative with that coordinated at other classification system [5]. Headache are rising up out of a musculature problem of the cervical spine entitled cervical area headaches (CGH). Cervicogenic headache is a persistent headache that emerges from the atlantooccipital and upper cervical joints, which can be seen in at least one region of the head or face [6, 7]. One of the most noteworthy explanations behind CEH is myofascial trigger point development (MTrP) MTrPs are solidified and restricted region of uncommon delicacy in a conspicuous tight band of skeletal muscle [8]. Myofascial pain condition is a typical excruciating muscle issue brought about by myofascial trigger points described by localized pain in a space of dull use or injury with resultant trigger focuses that cause non-dermatomal pain radiation upon palpation [9, 10]. Autonomic dysfunction and spontaneous EMG activity can be seen in the affected region [11, 12]. Trigger points are delegated dynamic or inactive, contingent upon their clinical attributes [9]. The aim of current study was to provide early intervention about that technique which is effective in comparison between 2 groups. So, that early outcomes can be achieved within minimum treatment sessions and less patient visits. The aim of current study was to provide early intervention about technique either positional release technique or Ischemic compression is effective in patients with cervicogenic headache inability and pain.

METHODS

A sample of 18 patients was taken in the present study and calculated by Epitool Software. Quasi experimental study was used and conducted in Rehab cure and Physiogic Physiotherapy clinic Lahore. The ethical committee of Riphah International University, Lahore, approved the study. To collect the data non-probability consecutive sampling technique was used. Both female and male with age of 18 to 30years were included with Headache Disability Index and Numeric pain rating scale rating with "single side pain in the neck and transmitting to the Front to side position.". Symptoms are persistent for at least four weeks while doing activity, sitting for prolong period of time, additionally have Presence of tangible tight overly sensitive band. Migraines occurrence of in any event once each end of the week extra than a quarter of a year were incorporated. Prior to treatment convention taking educated assent from patients and clarified treatment strategy were given. "Members were rejected if there is any set of experiences of Spinal contamination, Vestibular dysfunction, vertebral bump and factures, Neck or intracranial medical procedure, History of Radiating pain in the neck to furthest points and cervical plate disorder and joint inflammation of cervical spine. Contestants will be discarded in the event that they have advantageous essential cerebral pains (i.e., headache and solidness type migraine) two-sided cerebral pains any contraindication to active recuperation) in most recent a half year. The members were isolated into two groups. Group A was given PRT close by regular management, Which joins ultrasonic remedy for three minutes for every single muscle (SCM, UPPER TRAPEZIUS. 3MHz at 1.0 watts/cm2 electricity changes into for Upper trapezius, 3MHz at 1.Zero watts/cm2 power can be used for Sternocleidomastoid muscle. Group B was given Ischemic compression close by ordinary treatment, which fuses ultrasonic treatment for 3 minutes for each muscle. 3mega hertz at 1.0 watts/cm2 power will used for both muscles , by then Ischemic pressure will given at the utmost hyperirritable swollen area in the muscle midsection. Participants were completed headache Disability Index, and Numeric Pain rating scale at baseline and after 6 weeks. Pre and post readings were taken. The inclusion criteria were age from 18 to 30years, both male and female, Headache Disability Index and Numeric pain rating scale rating with "single side pain in the neck and transmitting to the Front to side position. "Symptoms are persistent for at least four weeks while doing activity sitting for prolong period of time, Presence of tangible tight overly sensitive band, Migraine occurrence of in any event once each end of the week extra than a quarter of a year. An exclusion criterion was Spinal contamination, Vestibular dysfunction, vertebral bump and factures, Neck or intracranial medical procedure, History of Radiating pain in the neck to furthest points. Assessment Tools were Headache Disability Index: a 27-item questionnaire. The initial two questions pose to the patient to recognize the frequency (1 per month; more than 1 but less than 4 per month; more than 1 per week) and intensity (mild, moderate, severe) of their headache. Numeric pain rating scale: a subjective measure in which people rate their aggravation on an eleven-point numerical scale. The scale is composed of 0 (no pain at all) to 10 (worst imaginable pain). Data were analyzed using IBM SPSS 24.0.

RESULTS

Table 1 shows that there were 9 (50.0%) participation with mean of 26.22 and SD 2.90 in group A and 9 (50.0%) participants with mean of 24.55 and SD 2.55 in group B.

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Study Groups		N	Mean ± SD
Group A Positional Release Technique	Age	18	26.22 ± 2.90
	Male	9 (50%)	
	Female	9 (50%)	
Group B Ischemic compression and conventional treatment	Age	18	24.55 ± 2.55
	Male	9 (50%)	
	Female	9 (50%)	

Table 1: Demographics of Participants

Table 2 shows the gathering correlation of VAS, KOOS AND AKPS with mean difference and standard p value of pre and post treatment values and within group comparison of VAS, KOOS AND AKPS showed significant difference in Group A as compared to group B.

Within Group Comparison	Group	Mean + SD	p-value
Pre NPRS	Group A	6.56 + 2.006	0.091
	Group B	6.44 + 1.9433	
Pre HDI	Group A	6.33 + 11.5863	0.56
	Group B	9.55 + 11.1361	
Post HDI	Group A	7.22 + 8.8852	0.09
	Group B	4.44 + 8.156	
Post NPRS	Group A	1.78 + 1.201	0.02
	Group B	3.78 + 1.922	

Table 2: Within & Across the Group Comparison of VAS, KOOS and AKPS

DISCUSSION

In the current study results showed more prominent decrease in the pain and improvement in headache disability for patients involved in cervicogenic headache in group A. Mean pre HDI values of group A and group B were 36.33 ± 11.586 and 39.55 ± 11.136 and in group B Post value of group A and B were 17.22 ± 8.885 and 24.44 ± 8.156 respectively. Patients in positional release technique group A detailed a clinically significant reduction in pain score than patients in ischemic compression group B. The results regarding score of numeric pain rating scale descriptive statistics showed that mean and the standard deviation before treatment, for group A and the Group B were to be 6.556 ± 2.006 and 6.444 ± 1.943 respectively, while after treatment these found to be 1.777 ± 1.201 and 3.778 ± 1.922 for Group A and B, respectively. Result showed greater reduction in pain of patients in Group A as compared to group B. Our measurements are likewise expected as those of Hong et al., who establish that strain/counters train decrease affectability to palpation in subjects indicating delicate focuses in the hip musculature part who got Positional Release Technique displayed that actuate point affectability lessened due to only utilization of the PRT [13]. Our outcomes settled with the previous studies that showed that positional delivery strategy was useful in diminishing touchiness implied by a flood in pressure edge of trigger zones in the upper trapezius muscle of member with mechanical neck irritation [14, 15]. Considering past composing and our current discoveries, PRT strategies can give quick lightening of hurt and neighborhood torment affected by MTrPs [16]. It is also confirmed that the usage of PRT may be incredible in making lessening of joint hypo portability when the muscle crossing joints changed over hypertonic or tight, the result is joint hypo portability. By using PRT, the affected muscles and fascial tissues relax [17, 18]. Medicinally, it has been revealed that the first, or neuromuscular period of the PRT going around ninety seconds for general orthopedic patients' and 3 minutes for neuro patients. PRT seems to impact inappropriate proprioceptive activity all through this stage, hence assisting with normalizing disposition and standard the common length-pressure relationship in the muscle. This end in the elongation of the included muscle fibers toward their consistent state and accordingly extended the ROM [19, 20].

CONCLUSIONS

Results showed that Positional release Techniques along with conventional therapy showed better results than ischemic compression technique group for improvement of pain and headache disability in cervicogenic headache patients.

Conflicts of Interest

The authors declare no conflict of interest.

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