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ORIGINAL ARTICLE

The Effect of Mobilization Combined with Soft Tissue Massage Versus Soft Tissue Massage Alone on Migraine Intensity

AMBREEN ZAHID[1], BASITA SAGHEER[2], IQRA MUBEEN[3], ALISHBA MUTASANSAR[4], FATIMA AMIN[5]
[1,2,3,4]*Senior lecturer, The University of Lahore*
[5]*Demostrator, The University of Lahore*
Corresponding author: Iqra Mubeen, Email: iqra.awan28@gmail.com, Cell: 03337222754

ABSTRACT

Background: Mobilization methods have shown optimistic results for the treatment of migraine, however previous studies also show unavailability of control group, or subjected to deficient methodological quality.

Aim: To differentiate the effects of cervical mobilization coupled with massage versus massage only on, headache frequency, intensity and disability in patients with migraine.

Methodology: A Randomized, single-blinded, controlled clinical trial was conducted in Izmir Medicare center. Subjects with migraine headache were selected and were divided into two groups: 1) Mobilization and massage (case) 2) Massage only (control). Four sessions of treatment was given in four weeks. Headache disability inventory (HDI) was evaluated before at baseline and after completion of treatment sessions.

Results: Study shows that cervical mobilization is effective treatment for migraine .according to result analysis both groups shows high improvement in score of HDI before and after treatment. Additionally, if compare with control group patient that receive additional treatment shows no significant results in reduction of migraine frequency among all data points.

Conclusion: This study shows positive results of treatment for migraine. Both interventions massage alone and massage with cervical mobilization showed positive results for migraine. Furthermore massage with mobilization shows more effective and positive results than alone massage on the four sub-components of HDI.

Keywords: Headache, Cervicogenic headache, head disability index (HDI)

INTRODUCTION

More than 47% people of the world have experienced headache in last few years (WHO)[1]. Few of them were diagnosed complete and accurately.[2] Due to lack of knowledge and misunderstanding of pathology behind leads to misdiagnosed and inaccurate treatment consequently.[3] Headache not only cause disabling pain, but also negatively affects lifestyle and activities of daily living of a sufferer[4,5]. Females are more affected than males[6]. Hence the objective of study was to compare the effect of cervical mobilization combined with soft tissues massage versus soft tissue massage alone on, headache frequency, intensity and disability in patients suffering from migraine.

MATERIAL AND METHODS

A Randomized controlled clinical trial was conducted at Izmir Medicare center after 6 months of synopsis approval. Simple random sampling technique was used and computerized randomization was done. Subjects included0aged0 between018 and 65 years, Diagnosed patients of migraine and Headache ≥ days/month for >3 months. Patients with Metabolic0or0musculoskeletal0 disorders0 with

Symptoms similar to headache (rheumatoid arthritis) and previous neck trauma were excluded[7]. An external assistant randomly allocated the patients to either the control or treatment group using a computer generated random sequence (graphpad.com).Patients were divided into two groups. Mobilization and soft tissue massage (treatment group) and Soft tissue massage only (control)[8]. Four treatment sessions were applied over four weeks[9]. A Single-blinded study. We used the Headache Disability Inventory (HDI) established by Jacobson et al[10,11] as our main ration of headache disability. It comprised two objects: headache severity (mild, moderate and severe) and frequency (once a month, more than once and less than four times a month, and once a week) and 25 items that assess two subscales(E = Emotional with 13 items and F = Functional with 12 items)[12]. Subjects answer each question (yes = 4 points, sometimes = 2 points or no = 0 points). The determined disability score in this inventory is 100 points[13]. The contestants were recommended in both the agreement form and evidence to their medication, activities or other treatments over the sequence of the study[14].

RESULTS

Among 20 experimental group patients, 7 (35%) patients were having pain in frontal region, 10 (45%) in parietal and 4 (20%) patients in occipital region. On comparing with control group, 14 (70%) patients were having pain in frontal region and 6 (30%) in parietal region. Among 20 experimental group patients, 2 (10%) showed mild, 7 (35%) showed moderate and 11 (55%) showed severe migraine pain and among 20 control group patients, 1 (5%) mild, 2 (10%) moderate and 17 (85%) showed sever migraine pain.20 experimental group patients, 12 (60%) patients were having pain during day time, 4 (20%) having pain in morning and 4 (20%) patients having pain in night. On comparing with control group, 3(15%) patients were having pain in morning, 5(25%) having pain at night and remaining 12(60%) patient having pain during day.

20 experimental group patients, 4 (20%) showed that bilateral pain and among 20 control group patients, 9 (45%) showed bilateral pain. Study shows that cervical mobilization is effective treatment for migraine .according to result analysis both groups shows high improvement in score of HDI before and after treatment. Additionally, if compare with control group patient that receive additional treatment shows no significant results in reduction of migraine frequency among all data points.

To test the hypothesis that pretreatment HDI and post treatment HDI, independent sample t-test were performed in experimental and control groups. Prior to test, assumption of homogeneity of variance was tested and satisfied via Levene's F test, F (0.677), p=0.787. The independent sample t test was associated with statistically significant in post treatment group with t=3.8 AN P= 0.0003. Thus the t-test nullifies null hypothesis. To measure the effect size, paired sample t-test was performed. The t-statistic value was 15.309 in experimental group and 13.40 in control group. The degrees of freedom were 19.The 2-tailed significance value was 0.000.

DISCUSSION

The t-statistic value was 15.309 in experimental group and 13.40 in control group. The degrees of freedom was 19.The 2-tailed significance value was 0.000.Because 0.000000<.05, conclude that the HDI among pre-treat were high in experimental group.

According to other studies it also proven that manual mobilization is an effective treatment for migraine[15]. The results of systemic review (manual therapy as proposed treatment of

migraine) shows manual therapy as craniosacral procedure, manipulation of spine, mobilization of spine and myofascial release have proven to be an efficient intervention strategy for the treatment of chronic migraine[16].

We significantly swatted RCTs on physiotherapy for migraine[17]. The Randomized Control Trials suggested that massage therapy, physiotherapy, relaxation and chiropractic spinal manipulative therapy may be same effective as propranolol and topiramate in the prophylactic management of migraine headache[18].

Alternative study clinched that manipulation is supplementary effective than mobilization of cervical spine[19]. Six to eight sittings of upper cervical and upper thoracic manipulation were exposed to be more operative than mobilization and workout in patients with CH, and the possessions were continued at 3 months[20]

Well along, performing to a randomized controlled trial, between the 300 subjects advanced, 50 women (age range, 18 – 55y) seen with migraine were distributed randomly into two groups: a control group (n=25) and a physiotherapy with medication group (n=25) (N=50). Both groups received medications for migraine treatment[21,22]. In addition, physiotherapy with pharmaceutical drugs patients received 8 sessions of physical therapy over 4 weeks, mainly comprised on manual therapy and stretching exercises lasting for 50 minutes. Twenty-three patients suffering from side-effects of the pharmaceutical drugs[23]. Similar groups described a significant reductions in frequency of headaches; although, no variations were listed between both groups (physiotherapy with medication subjects presented an added 18% perfection after treatment and 12% perfection at follow- up associated with control patients, P>.05)[24]

Our study is exceptional because it is one of the rare that has established the effectiveness of mobilization techniques in the treatment for migraine and headache disability. In addition, the sample is satisfactorily illustrative, the study is systematically laborious, a hypothetically advantageous treatment for both groups of patients was on condition that, and it is conducted by specialized manual therapist. We don't considered muscle response against treatment, However it was not an objective of this study. So, we suggested that in future studies electromyography should be included. Another limitation was long-term follow-up. Studies with long term follow up are highly recommended. We also recommended those researches which include not only physical treatments but also psychological interventions as they helps to treat the emotional aspects of headache specifically.

CONLCUSION

This study shows positive results of treatment for migraine. Both interventions massage alone and massage with cervical mobilization shows positive results for migraine. Furthermore massage with mobilization shows more effective and positive results than alone massage on the four sub-components of HDI.

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