

To study the Effectiveness of soft tissue manipulation and Sub Occipital inhibition for patients with Tension type headache.

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ABSTRACT

Aim Of Study:

To Study the effectiveness of Massage therapy and suboccipital soft tissue inhibition in patients with Tension Type Headache.

Method of Study:

10 Subjects were selected with tension type headache. Pre test evaluated by HDI Scale & Visual analog scale.

Then the subjects are treated with massage and suboccipital soft tissue inhibition technique. Post test evaluated by HDI & VAS. Pre & Post test value are recorded, compared & analyzed.

Result:

From the Pre test and Post test value shows a significant reduction in pain intensity and improvement in functional ability when treated with massage therapy and suboccipital inhibition technique for patients with Tension Type Headache.

Conclusion:

From this study it was concluded that massage therapy & Suboccipital Soft Tissue Inhibition technique were effective in reducing pain intensity in patients with tension type headache.

Key Words:

sub occipital inhibition technique, Head ache disability index, visual analog scale, Tension Type Headache.

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I. INTRODUCTION:

Headache is the most prevalent neurologic disorder and is experienced by almost everyone. Tension-Type and Cervicogenic Headache: Pathophysiology, Diagnosis, and Management.^[1]

Overall, the prevalence of current headache is 47%, Current migraine is 10%, Current Tension Type Headache is 38% Chronic headache is 3%.^[2]

Headache is one of the most common types of human pain, as well as one of the most common reasons for medical consultation.^[3]

Tension Type Headache is indeed the most common headache, but it is chiefly its chronic form (Chronic Tension Type Headache), affecting 3% of the general population.^[4]

A number of studies have evaluated the effects of physical therapy on Tension Type Headache. Studies show that massage postural techniques, cervical mobilization, cervical relaxation exercises, gentle and progressive stretching (or) trigger point therapy, are effective at reducing the intensity, frequency and duration of headache, as well as increasing cervical range of motion.^[5]

Tension type headaches (TTH) are recurrent episodes of headache lasting minutes to weeks. The pain is typically pressing or Tightening in quality, of mild to moderate intensity, and bilateral in location, and does not worsen with the routine physical Activity. Nausea and vomiting is usually absent, but photophobia or phonophobia may be present.

These headaches were Previously known by many terms such as psychogenic headache, Stress headache, psycho-myogenic headache, muscle contraction Headache etc. However, the term "tension type headache" (TTH) Has been chosen by the International Classification Headache Diagnosis I (ICHD I) in 1988 and have been retained by ICHD II in 2004.^[6]

The suboccipital muscle inhibition technique is a manual technique that aims to relax the tension in the suboccipital muscles by decreasing the myofascial restriction in the suboccipital region.^[7]

Physical therapy is the most commonly used non-Pharmacologic treatment of TTH. Its components include Improvement of posture, relaxation, exercise programs, hot And cold packs, ultrasound, and electrical stimulation. Active treatment strategies generally are recommended. A controlled study combining various techniques, such as Massage, relaxation, and home-based exercises found a Modest effect.^[8]

Materials and Methods

Study Design

The study design is a Quasiexperimental study with the 10 number of population selected based on the inclusion criteria. The study were conducted in Outpatient department in Physiotherapy Outpatient Department, Adhiparasakthi College of Physiotherapy, Melmaruvathur. Chennai.

PROCEDURE:

A(1) MASSAGE OF FRONTAL MUSCLES

Patient Position: Supine lying

Therapist Position: Standing at the cephalic end of the patient

Step 1: Start the massage at the middle of the forehead bilaterally. Begin with a smooth, firm Stroking massage (effleurage).

Step 2: Continue the massage along the forehead upto earlobe.

Step 3: Repeat the massage using kneading technique.

Step 4: end the massage again with stroking and effleurage.

A(2) MASSAGE OF NECK MUSCLES (SUBOCCIPITAL MUSCLES)

Patient Position: Forward lean sitting with pillow under head.

Therapist Position: Standing behind the patient.

PROCEDURE:

Step 1: start the massage at the occipital attachments of the upper trapezius. Begin with a smooth firm stroking massage (effleurage)

Step 2: Continue the massage along the trapezius to the attachments on the clavicles and scapulae.

Step 3: Repeat the massage using a kneading technique (petrissage) to the left and right upper trapezius.

Step 4: With face turns left to put in mild stretch on the left trapezius, repeat the stroking and kneading massage.

Step 5: With face turns right to stretch right trapezius, repeat the stroking and kneading massage.

Step 6: Sit with left side towards table, with elbow on the table, rest head on hand. With head tilted toward left, massage right lateral neck muscles. Reverse the above positions to Massage left lateral neck muscles.

SUB OCCIPITAL INHIBITION

Patient Position - Supine Position.

Procedure - The patient's head leans against the physiotherapist's hands, which palpate Suboccipital muscles by sliding fingertips until contacting posterior arch of atlas.

At this point, a deep progressive gliding pressure is applied for 10 minutes.

II. Analysis and Results:

Table:1 Analysis HDI

	GroupA	Mean	SD	tvalue	p-value
HDI	Pretest	54.7	13.06	6.866	0.001
	Posttest	26.9	5.01		

The above table shows that there is a significant difference between pre and post test values of HDI

Table: 2 Analysis VAS

	GroupA	Mean	SD	tvalue	p-value
VAS	Pretest	7.2	1.16	15.057	0.001
	Posttest	2.6	0.91		

The above table shows that there is significant different between pre and post test values of VAS

Paired Samples Statistics

	Mean	N	Std. Deviation	Std. Error Mean
Pair 1 HDI pre	54.7000	10	13.77639	4.35648
HDI post	26.9000	10	5.27994	1.66966
Pair 2 VAS pres	7.2000	10	1.22927	.38873
VAS post	2.6000	10	.96609	.30551

****p<0.001**

Paired Samples Test

	Paired Differences	Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference		t value	df
					Lower	Upper		
Pair 1 HDI pre -HDI post		27.80000	12.80451	4.04914	18.64020	36.95980	6.866**	9
Pair 2 VAS pre - VASpost		4.60000	.96609	.30551	3.90890	5.29110	15.057**	9

****p<0.001**

III. DISCUSSION:

This study was aimed to investigate the effectiveness of massage and suboccipital inhibition for patients with Tension type headache. Result indicates that neck massage i.e soft tissue mobilization along with suboccipital inhibition is a feasible intervention during pain and rehabilitation. Cervical exercises, relaxation, massage, postural exercises, cranio-cervical techniques, thermotherapy, vertebral mobilization and stretching are effective in reducing TTH symptoms such as pain frequency and intensity.

Lopez GV, Conesa AG, et al stated that regarding the effects of the suboccipital muscle inhibition technique, the results are supported by a similar study, which found that suboccipital muscle inhibition decreased pain intensity in patients with tension headache through its inhibitory effect that released the suboccipital muscles spasm.

Albert F. Moraska, PhD stated that the massage protocol used in the study was highly structured, with muscles most commonly associated with pain referral to the head (upper trapezius, sub-occipitals, and Sternocleidomastoid) addressed for MTrPs during each visit. While this consistency enhanced reproducibility of procedure, it may have limited treatment efficacy as pericranial muscles (e.g. temporalis, superior oblique, masseter, levator scapula) also generate referred pain from MTrPs and may contribute to TTH.

IV. CONCLUSION

From the result, it has been concluded that treatment with soft tissue manipulation & Sub-occipital inhibition is effective in patients with tension type headache.

Soft Tissue manipulation (i.e) massage helps to decrease the pain and spasm around the neck, suboccipital

and frontal muscles. Suboccipital inhibition release muscle spasm, which can be responsible for the mobility dysfunction of occipital-atlas-axis joint.

Based for the pre and post test score of headache disability inventory & Visual analog scale, soft tissue manipulation and suboccipital inhibition had significant effect in reducing pain and Disability.

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