



COMPARATIVE STUDY OF MYOFASCIAL RELEASE TECHNIQUE AND TRANSVERSE FRICTION MASSAGE WITH THERMOTHERAPY IN CERVICAL TRIGGER POINTS.

Physiotherapy

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ABSTRACT

Introduction:- Myofascial trigger points become an extreme common complaint of industrialised and corporate population who are engaged in low level static exertion as in desk jobs. A wide spectrum of symptoms are indicated, pain being the predominant one compelling individual to seek intervention. Myofascial Pain Syndrome has been shown to have negative impact on quality of life as it intervenes with patient's basic daily living activities, increasing their disability index and even affecting their utilisation of health services. Patients with trigger points present the complex clinical findings and the underlying cause has been the subject of speculation. So, this study was planned to find out the effect of myofascial release technique and soft tissue manipulation

Objective:- To compare the effects of myofascial release technique soft tissue manipulation on cervical pain and cervical range of motion in patients with cervical myofascial pain syndrome.

Methodology: A total of 30 patients, age 25 – 45 years, of both genders, with unilateral cervical trigger point, were selected from the Physiotherapy OPD of Punjabi University, Patiala. Patients were assessed for cervical pain and cervical range of motion with visual analogue scale (VAS) and universal goniometer respectively. After that, the patients were equally divided into two groups i.e. A & B, consisting of 15 patients in each group. Group A was treated with Myofascial Release Techniques whereas Group B was treated with Transverse Friction Massage. Both the groups were given short wave diathermy as thermotherapy. Patients were re-assessed after the completion of treatment i.e. 30 days.

Results: This study shows that in both Groups i.e. Group A & Group B, there was a statistical significant difference in p-value for pain and cervical range of motion for both groups.

Conclusion:- It is concluded that both the techniques i.e. myofascial release technique and transverse friction massage are equally effective in myofascial pain syndrome, indicating the improvement in the intensity of pain and cervical range of motion at the end of treatment session.

KEYWORDS

Myofascial Trigger Points, Pain, Cervical Range Of Motion

INTRODUCTION

Myofascial pain syndrome has emerged as a predominant cause of musculoskeletal pain, as a result of trigger points. It is an extreme common complaint of industrialized and corporate population, who are engaged in low level static exertions as in desk jobs^{1,2,3}. A wide spectrum of symptoms includes pain and limitation in the motion has negative impact on quality of life as it interferes with patients daily living activities, increasing their disability index and even affecting their utilization of health services⁴. It is significantly affecting individual productivity as it is becoming growing cause of workers absenteeism. Myofascial trigger points are hyperirritable spot associated with taut bands of skeletal muscle fibers and causes dull, non pulsating pain both at rest and during activity. There are two types which has been identified that are latent and active Myofascial trigger points secondary to various pathological lesions. It is common cause of acute and chronic pain that can complicate other medical illness and injuries. Patients with MTrPs presents the complex clinical findings and the underlying cause of MTrPs has been the subject of speculation. In physiotherapy different methods and modalities have been advocated to treat MPS and most of them comprises of manual therapy and thermotherapy. Among these treatment methods Deep friction massage therapy helps in compression of MTrPs which provides counterirritant effects and inhibition in the spinal cord⁵.

METHODS-

Thirty patients with Mean Age 25-45 Years, both Males and Females with unilateral presence of trigger points and limited range of motion were included in the study, whereas severe osteoporosis, recent fracture, skin inflammatory conditions and tumors were excluded. The patients were divided into two groups comprising 15 patients each. Group A was given combination treatment of myofascial release of cervical region and short wave diathermy and Group B patients were treated with transverse friction massage⁶ plus Microwave diathermy. In both Groups Pain and Cervical Range of motion were assessed by using Visual analogue scale(VAS) and Universal Goniometer⁷ and Measurement of initial and final VAS and CROM readings of treatment Group A and Group B were done.

RESULTS AND ANALYSIS-

The results showed a statistically significant difference among the pre and post values of VAS and cervical range of motion after the end session of treatment.

TABLE 1.1 Comparison of VAS at pre and post VAS score values within Group A and Group B among the myofascial trigger point patients. The calculated t value is significant in both groups.

Group	VAS score	Mean	Standard Deviation	Standard Error Mean	T value	Significance
Group A	PRE	6.00	1.03	.266	18.50	Significant
	POST	1.07				
Group B	PRE	6.00	0.74	.191	23.623	Significant
	POST	1.47				

TABLE 1.2: Compare the pre and post Cervical flexion ROM score values between Group A and Group B

GROUP	Mean Difference	STANDARD DEVIATION	T value	Significance
Group A	9.80	1.37	2.269	significant
Group B	8.80	1.01		

TABLE 1.3: Compare the pre and post Cervical Extension ROM score values between Group A and Group B.

GROUP	Mean Difference	STANDARD DEVIATION	T value	Significance
Group A	10.33	1.45	2.694	significant
Group B	8.20	2.70		

TABLE 1.4: Compare the pre and post Cervical Lateral Flexion ROM score between Group A and Group B

GROUP	Mean Difference	STANDARD DEVIATION	T value	Significance
Group A	10.80	1.37	2.483	significant
Group B	9.67	1.11		

TABLE 1.5: Compare the pre and post Cervical Rotation score between Group A and Group B

GROUP	Mean Difference	STANDARD DEVIATION	T value	Significance
Group A	11.93	2.05	3.372	significant
Group B	9.60	1.72		

DISCUSSION –

In this study both Groups of patient with unilateral myofascial pain syndrome and restricted range of motion were analyzed through the scale and it has been analysed that these techniques become the

important part of treatment along with conventional therapy. Most of the interventions for cervical Myofascial trigger points are solely targeted in reducing pain intensity while decreased range of motion mainly remains unattended. In present study the result showed the effectiveness of Myofascial release technique as well Transverse friction massage in reduction of pain, muscle spasm and improve extensibility and improvement in cervical range of motion. The significant changes in VAS score was seen in study that is assisted by the study of Vernon et al: 2008, Fryer et al 2005 after application of myofascial release technique^{8,9}. The result of present study showed a significant increase in post treatment readings of cervical range of motion compared with pre treatment scores after 10 treatment sessions of Group A (Myofascial release technique plus short wave diathermy).

Limitation of the study-

Some limitations were seen in the study, first limitation is that palpation application was used for trigger points, more sensitive investigatory tool may be used as diagnostic criteria. -Additional limitations included that the study consisted of small sample size and not gender specific.

CONCLUSION-

The study concluded that there is a significant improvement in treatment post mean values of Cervical Pain and Range of motion indicating group A has higher score as comparative to group B at the end of 10 treatment session.

REFERENCES

1. Friction JR, Kroening R, Haley D, Siegert R: Myofascial pain syndrome of head and neck. *oral surg oral med oral pathol*, 60:615-623; 1985
2. Bennett R. Fibromyalgia: present to future *Current rheumatology reports*. 7(5): 371-376; 2005
3. Treaser D, WS, Marras D, Burr JE, Sheedy, Har. Myofascial trigger point development from visual and postural stressor during computer work *Journal of Electromyography and Kinesiology*. 16(2): 115-124; 2005.
4. Sanchez AM, Penarrocha GA, Malina JG, Manrique GA: Benefits of massage myofascial release therapy on pain, anxiety, quality of sleep, depression and quality of life in patients with fibromyalgia. *Hindawi Publishing Corporation*. 9 ID 561753; 2010.
5. Kutner JS, Smith MC, Corbin L. Massage therapy versus simply touch to improve pain and mood in patients with advanced cancer. *Ann Intern Med*. 149(6): 369-379; 2008.
6. Kumar M. Effects of myofascial release technique versus transverse friction massage in trigger point syndrome: 2007.
7. Youdas J W, Carey. Reliability of measurements of cervical spine ROM comparison of three methods. *physical therapy*. 71(2): 99-104; 1991
8. Vernon H, Scheneider M. Management of myofascial trigger points: systemic review of the literature. *J Manipulative Physiol Ther*. 32:14-24; 2008.
9. Fryer G, Hodgson L. The Effect of manual pressure release on myofascial trigger points in the upper trapezius muscle. Elsevier Ltd; 2005.
10. Hong CZ, Simons DG. Pathophysiological and electrophysiological mechanisms of myofascial trigger points. *Arch Phys Med Rehabil*. 70(79): 863-872; 1998.