THE EFFECT OF SOFT TISSUE MOBILIZATION ON PAIN, FUNCTION AND DEPRESSIVE SYMPTOMS in PATIENTS WITH CHRONIC LOW BACK PAIN

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BACKGROUND AND AIMS

Although 90% of people with non-specific LBP recover within a few weeks with or without treatment, 10% becomes chronic [1]. In this case, soft tissue healing does not occur at the expected time and the dysfunction becomes apparent [2]. At that situation, the target is to provide normal spinal function and prevent disability at that patients [3]. Soft tissue mobilization (STM) has been developed to evaluate and treat soft tissue dysfunctions that precipitate myofascial pain. The aim of this study was to investigate the effect of STM on pain, function and depressive symptoms in chronic non-specific low back pain (CNSLBP) patients.

RESULTS

Comparing test scores; decrease in pain intensity, disability level and depressive symptoms were statistically significant in both groups ($p<0.001$) (Table 1) (Table 2). According to delta scores; adding STM to CPP resulted in higher improvement in terms of pain intensity ($p=0.05$) and function ($p=0.042$) but there is no improvement in depressive symptoms (0.460) (Table 3).

Table 1. Assessment of pain intensity, depressive symptoms and disability status of study group

Variables	Pre-Treatment		Post-Treatment		p*
	X	SD	X	SD	
VAS activity	6.88	2.44	3.08	2.21	**0.0001**
BDI	11.10	7.69	8.21	7.94	**0.0001**
RMDI	13.98	6.69	9.28	6.16	**0.0001**

*VAS: Visual Analog Scale; BDI: Beck Depression Inventory; RMDI: Roland Morris Disability Index; SD: Standard Deviation; *: Paired Sample t-test*

CONCLUSSION

The results of this study indicated that adding Soft Tissue Mobilization to Conventional Physiotherapy Program may result in greater improvement of pain intensity and function of Chronic Non-specific Low Back Pain patients. As a result; It has been shown that STM improves tissue healing, releases the fascia, and reduces muscle spasms. Thus, the pain decreased and the function increased.

FIGURE 1. NEUROMUSCULAR STRETCHING TECHNIQUE TO QUADRATUS LUMBORUM MUSCLE

METHODS

122 patients (78 females, 44 males, mean age: 51.08 ± 10.78 years) with CNLBP were randomly divided into 2 groups. The study group (65 subjects) received a conventional physiotherapy program (CPP) consisted of hot packs, ultrasound, TENS and exercise plus STM technique and the control group (57 subjects) received the same CPP without STM 3 times per week for 3 weeks. A total of 10 sessions of exercise therapy were administered 10 repetitions 3 times a day with physiotherapist supervision. STM Program involving streching the thoraco-lumbar fascia, neurological stretching to Quadratus lumborum muscle, friction massage to paravertebral muscles, Psoas major muscle and ilio-lumbar ligament was applied for 20-25 min until muscle relaxation was obtained. Outcome measures were pain (Visual Analog Scale), function (Rolland Morris Disability Questionnaire), depressive symptoms (Beck Depression Scale). Measurements were recorded before and after the treatment.

Table 2. Assessment of pain intensity, depressive symptoms and disability status of control group

Variables	Pre-Treatment		Post-Treatment		p*
	X	SD	X	SD	
VAS activity	6.68	2.38	4.52	2.59	**0.0001**
BDI	12.54	8.51	10.36	8.12	**0.011**
RMDI	14.53	5.48	12.08	5.94	**0.0001**

*VAS: Visual Analog Scale; BDI: Beck Depression Inventory; RMDI: Roland Morris Disability Index; SD: Standard Deviation; *: Paired Sample t-test*

Table 3: Comparisons of delta scores between treatments after treatment

Variables	Study Group		Control Grup			
	Δ	SD	Δ	SD	p*	%95 CI
VAS activity	3.72	2.60	2.39	2.49	**0.005**	0.40 – 2.25
BMI	2.89	4.34	2.17	6.27	0.460	-1.19 – 2.63
RMDI	4.69	5.40	2.84	3.63	**0.042**	0.069 – 3.60

*VAS: Visual Analog Scale; BDI: Beck Depression Inventory; RMDI: Roland Morris Disability Index; SD: Standard Deviation; *: Independent Sample t-test; Δ: variable difference between pre and post treatment*

FIGURE 2. MANUAL TENSIONING TECHNIQUE FOR THORACO LUMBAR FASCIA

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