

Impact of Neurotherapy Treatment in Pain Relief among Patients having Low Back Pain

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ABSTRACT

Neurotherapy deals with the whole body/mind system in totality. The therapy uses the by-now well-established knowledge, that our body, like all other living beings in the universe, has the vital energy to cure itself, without any interference from external sources. Present study intended to the impact of neurotherapy in pain relief among patients of low back pain. To conduct the present study 92 samples selected by the author conveniently and treated with the planned treatment package of neurotherapy, 30 minutes daily for 3 months regularly. Before starting the treatment pre test had been conducted on VAS and after the treatment patients had been recorded again as post test on VAS. In results found that t value is 45.307 at .01 level. This is highly significant. Hence it is concluded that neurotherapy treatment is very effective on the pain relief among low back pain patients. In totality 96% patients had recorded improvement in their low back pain after the regular neurotherapy treatment.

Keywords: *Low Back Pain, Neurotherapy, Visual Analogue Scale, Treatment*

Neurotherapy is the therapy which deals with the whole body system. It uses the internal capacities of human being and stimulate the different body parts through different pressures and massage. Now the neurotherapy is the well established therapy for the all types of treatments of medical as well as muscular problems of the body. It does not require chemicals or medicines from outside, because the body heals itself by creating the requisite hormones and chemicals. The Neurotherapy focuses on the cause not at the symptoms of the disease.

It is evident that Low back pain (LBP) is one of the most frequent causes of disability. Low Back Pain is defined as pain localized below the margin of the last ribs (costal margin) and above the inferior gluteal lines, with or without lower limb pain (Van Middelkoop M, Rubinstein SM, Verhagen AP et al (2010). The prevalence of low back pain is 60-85% during an individual's lifetime (Krismer M, van Tulder, M. (2007). At some point in life, between 15% and 20% of adults have this syndrome (Krismer M, van Tulder M. (2007), (Fernández-de-las-Peñas C, Hernández-Barrera V, Alonso-Blanco C et al (1976). Most of the cases (approximately 90%) are nonspecific and occur in all age groups 1. Local sources of LBP are intervertebral discs, facet joints, sacroiliac joints, muscles, fascia, bones, nerves,

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and meninges (Winkelstein BA, Weinstein JN, DeLeo JA (2002). The causes of LBP are herniated discs, osteoarthritis, myofascial syndrome, spondylolisthesis, ankylosing spondylitis, rheumatoid arthritis, fibrosis, arachnoiditis, tumor, and infection. The number of spinal disorders is large, particularly those related to posture, inadequate body movements, and working conditions that may affect the spine (Verbeek JH, van der Weide WE, van Dijk FJ. (1976). Due to the variety of factors involved, no therapeutic technique is effective for all patients.

The LBP may be classified as mechanical, non-mechanical, and psychogenic. Mechanical LBP may be specific or nonspecific. According to its duration, LBP may be acute (sudden onset and lasting less than six weeks), sub-acute (lasting 6 to 12 weeks), chronic (lasting longer than 12 weeks), and recurrent (reappears after lull periods) (Bratton RL (1999). It can be divided into five categories: viscera genic (e.g. abdominal diseases), vascular (e.g. abdominal aortic aneurysm), and psychogenic (psychological factor inducing pain), neurogenic (nervous system injury), and espondylogenic (e.g. disc herniation and osteoarthritis) (Stanton TR, Latimer J, Maher CG et al (2010). The LBP caused by musculoskeletal disorder can be congenital, degenerative, inflammatory, infectious, malignant, and mechanical postural.

Mechanical - or nonspecific - LBP is the most commonly reported by the population. The human body has a center of gravity, which keeps the balance between muscles and bones to maintain the integrity of structures and protect them against injury, in any position- standing, sitting or laying down. In nonspecific LBP, imbalance typically occurs between the functional load - which is the effort required for work and activities of daily living, and ability - which is the potential for performing these activities. Nonspecific LBP is characterized by the absence of structural change; that is, there is no disc space reduction, nerve root compression, bone or joint injuries, marked scoliosis or lordosis that may lead to back pain. Only 10% of LBP has a specific cause due to a particular disease (Deyo RA, Rainville J, Kent DL (1992). Despite the lack of structural change in nonspecific LBP, it can limit daily activities and cause temporary or permanent inability to work, being one of the main causes of absence at work in the Western world (Krismer M, van Tulder M (2007).

The incidence of nonspecific LBP is higher in workers subjected to heavy physical exertion, such as weight lifting, repetitive movements, and frequent static postures (Andrade SC, Araújo AG, Vilar MJ (2005), (Dagenais S, Caro J, Haldeman S (2008).

MATERIAL AND METHODS

Samples

Single-group experimental study design, as this study involved human subjects the free consent had been taken from the subjects. Present study had been conducted at neuro therapy centre Mohali.

Ninety-two consecutive patients were selected for neurotherapy treatment from all those referred or self-directed to take the neurotherapy. Referrals were received predominantly from general physicians, with some also from orthopaedic surgeons and physiotherapists. All patients had received other treatments prior to being referred to the neurotherapy including one or several of the following: analgesic medication; physiotherapy; complementary treatments – chiropractic, osteopathy, reflexology, massage, aromatherapy; injections; surgery; manipulation under anaesthesia.

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Sample selection

No formal inclusion or exclusion criteria were applied and the patients were offered neurotherapy by the author if he felt that they were likely to respond. This was a choice made according to subjective criteria informed by his experience. Patients with the following features were not offered neurotherapy: major psychosocial problems; poor stress management.

Treatment

Patients who were established on ongoing treatment, such as analgesic medication and TENS, but had insufficient pain relief, received neurotherapy as an additional treatment with no alteration made to the ongoing treatments. No patient received acupuncture at the same time as having physiotherapy or other physical therapies. All treatments were given by the same neurotherapist (the author). Neurotherapy treatment was standardised and not customised to the individual patient. The neurotherapy technique evolved and was refined over the years as the experience of the neurotherapist grew. Over the years the author 'experimented' with various combinations of neurotherapy treatments.

The following therapies were included in the study to treat the pain of patients:

1. (6)ADR/(8)ADR: This treatment applied on the thoracic region of the spine from 4th V to 12th V. it directly affect the adrenal gland and produce a positive effect to reduce the pain. Glucocorticoids are stimulated with this treatment. It helps in treatment of inflammatory disorders.
2. (60)TF:GAL:LIVER: This treatment used to regenerate tissues and organs in injury. And also helps in to inhibit histamine.
3. GALL BLADER and LIVER: GAL:LIVER: This treatment used to stimulate steroids and hormones in the body. It also helps to promote antibodies.
4. THYMUS: it stimulate the histamine and steroids. It helps in regenerating (H4) of body tissues during injuries and inflammation.

The depth of treatment depended on the neurotherapist's subjective assessment of patient sensitivity. Treatments were given on a daily basis upto 3 months and then interval between treatments increased upto 6 months. If patients reported no benefit from treatment after 10 sessions then neurotherapy treatment was discontinued and the treatment was counted as a failure. Patients who responded to treatment continued with neurotherapy presented by the author.

Outcome assessment

The Visual Analogue Scale (VAS) was used for subjective evaluation on back pain. It was recorded as no pain at the left end (0 mm), maximum pain the participant experienced in the past at the right end (100 mm) on a linear scale of 100 mm. The patients were asked the following question: 'Compared to how your pain was before the start of treatment, how much has it improved after the treatment on a point scale from 0 to 10, where 10 would mean the pain is still the same and 0 that the pain is completely gone?' The points of improvement reported by the patient was taken as an outcome measure. The patients who rated an improvement of 50% or greater were counted as indicating successful treatment, and those with less than 50% as failed treatment.

RESULTS

Table 1.1: Pre Test Scores of Patients on VAS who received the neurotherapy treatment:

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid 5.00	1	1.1	1.1	1.1
6.00	1	1.1	1.1	2.2
7.00	4	4.3	4.3	6.5
8.00	10	10.9	10.9	17.4
9.00	30	32.6	32.6	50.0
10.00	46	50.0	50.0	100.0
Total	92	100.0	100.0	

Table 1.1 depict that patients had expressed their pre-test scores from 5 to 10 rating. 50% of the total patients had showed their pain rating as severe pain with rating 10 and 32 % patients had expressed their pain with 9 points. 10.9% patients had showed 8 point rating on their pain. 4.3% patients expressed 7 points rating and 2.2% patients had expressed the 5 and 6 ratings.

Table 1.2: Post Test Scores of Patients on VAS who received the neurotherapy treatment:

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid 2.00	32	34.8	34.8	34.8
3.00	37	40.2	40.2	75.0
4.00	18	19.6	19.6	94.6
5.00	2	2.2	2.2	96.7
6.00	2	2.2	2.2	98.9
7.00	1	1.1	1.1	100.0
Total	92	100.0	100.0	

Table 1.2 depict that patients had expressed their post-test scores from 2 to 7 ratings. 34% of the total patients had showed their pain rating as relief in pain with rating 2 and 40.2 % patients had expressed their pain relief with 3 points. 19.6% patients had showed 4 point rating on their pain in the post test. 2.2% patients expressed 5 points rating and 2.2% patients had expressed the 6 point ratings. Only 1.1% patients had expressed no pain relief with 7 point rating or less pain relief after neurotherapy treatment. Hence it is proved that neurotherapy treatment is very effective in pain relief among patients with low back pain.

Table 1.3: Post Test Scores on VAS * Pre Test Scores on VAS (Cross tabulation) of Patients who received the neurotherapy treatment:

		Pre Test Scores on VAS						Total
		5.00	6.00	7.00	8.00	9.00	10.00	
Post Test Scores on VAS	2.00	1	1	3	1	13	13	32
	3.00	0	0	0	5	12	20	37
	4.00	0	0	1	3	4	10	18
	5.00	0	0	0	1	0	1	2
	6.00	0	0	0	0	1	1	2
	7.00	0	0	0	0	0	1	1
Total		1	1	4	10	30	46	92

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Table 1.4 depict that what was the expression of patients who received neurotherapy treatment with reference to their pre test scores. The above table show that (46/92)50% patient given the 10 point rating to their pain. Out of which (13/46)28 % patients expressed their pain relief with 2 points rating and (20/46) 43% patients had shown the pain relief rating with 3 points. (4/46) 8% patients had shown with the rating in post test score with 4 points. Only (1/46) 2 % patients had expressed 6 points rating in their post test scores. Hence it is evident from the above that neurotherapy has positive effect on the pain relief among patients with low back pain. In the pre test (30/92) 32% patients had expressed their pain severity with 9 points on VAS out of which (13/30) 43% had shown 2 rating and (12/30) 40% had shown 2 and 3 rating respectively. (4/30) 13% patients had shown the 4 point rating in their pain relief. 3% patients had shown their rating with 6 points. (10/92) 10.8% patients had shown the 8 point rating in their pain on VAS out of which (1/10) 10% patients had given 2 point rating in the pain relief after neurotherapy treatment. (5/10) 50% patients had given the 3 points rating in their pain relief and (3/10) 30% patients had given 4 points rating in their pain relief. (4/92) 4.8% patients had given the 7 point rating in their pain severity during pre test and after treatment (3/4) 75% of patients had shown pain relief with 2 points rating and (1/4) 25% patients expressed their pain relief rating as 4 points. Only 1 patient had expressed their pain severity during pre test with point 6 and 1 patients had expressed 5 points rating during pre test. Both the patients had expressed their pain relief with 2 rating on VAS at the time of post test.

Table 1.4 Comparison of Pre test v/s Post test Scores of Patients on VAS who received the neurotherapy treatment:

Domain		N	Mean	Std. Deviation	t-value, df & p-value
Between Pre and Post	Pre test	92	9.2283	1.00661	t'=45.307, df=91, p<0.01
	Post test	92	3.000	1.00548	

Table 1.4 depict the pre-test - post-test comparison of the patients who received the neurotherapy treatment to reduce their low back pain. In the above table pre test mean scores are 9.2283 and post test mean scores are 3.000. the standard deviation is 1.00661 and 1.00548. the difference the mean scores are 6.2283 which express the improvement in the low back pain of the patients. While seeing the significance of the difference in the mean scores t test had been conducted and find that t value is 45.307 at .01 level. This is highly significant. Hence it is concluded that neurotherapy treatment is very effective on the pain relief among low back pain patients.

DISCUSSION

Present study intended to see the impact of neurotherapy on the pain relief among patients with low back pain. For the study purpose author had selected Ninety-two consecutive patients for neurotherapy treatment from all those referred or self-directed to take the neurotherapy. Referrals were received predominantly from general physicians, with some also from orthopaedic surgeons and physiotherapists. All patients had received other treatments prior to being referred to the neurotherapy including one or several of the following: analgesic medication; physiotherapy; complementary treatments – chiropractic, osteopathy, reflexology, massage, aromatherapy; injections; surgery; manipulation under anaesthesia. In results found that most of the patients shown positive impact on reducing low back pain. In the present study it is found that (46/92)50% patient given the 10 point rating to their pain. Out of which (13/46)28 % patients expressed their pain relief with 2 points rating and (20/46) 43% patients had shown the pain relief rating with 3 points. (4/46) 8%

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patients had shown with the rating in post test score with 4 points. Only (1/46) 2 % patients had expressed 6 points rating in their post test scores. Hence it is evident from the above that neurotherapy has positive effect on the pain relief among patients with low back pain. In the pre test (30/92) 32% patients had expressed their pain severity with 9 points on VAS out of which (13/30) 43% had shown 2 rating and (12/30) 40% had shown 2 and 3 rating respectively. (4/30) 13% patients had shown the 4 point rating in their pain relief. 3% patients had shown their rating with 6 points. (10/92) 10.8% patients had shown the 8 point rating in their pain on VAS out of which (1/10) 10% patients had given 2 point rating in the pain relief after neurotherapy treatment. (5/10) 50% patients had given the 3 points rating in their pain relief and (3/10) 30% patients had given 4 points rating in their pain relief. (4/92) 4.8% patients had given the 7 point rating in their pain severity during pre test and after treatment (3/4) 75% of patients had shown pain relief with 2 points rating and (1/4) 25% patients expressed their pain relief rating as 4 points. Only 1 patient had expressed their pain severity during pre test with point 6 and 1 patients had expressed 5 points rating during pre test. Both the patients had expressed their pain relief with 2 rating on VAS at the time of post test.

In relation to the present study some individuals with chronic low back pain exhibit a reduced aerobic capacity compared with healthy controls (Van Der Velde G, Mierau D. (2001), but as with flexibility and strength, cardiovascular performance is strongly influenced by activity-related increases in pain intensity during testing (Wittink H, Rogers W, Gascon C, Sukiennik A, Cynn D, Carr DB (2001) and therefore poor performance may not indicate real impairments in cardiovascular function (Wittink H, Rogers W, Gascon C, Sukiennik A, Cynn D, Carr DB (2001), Hurri H, Mellin G, Korhonen O, Harjula R, Harkapaa K, Luoma J.(1991). Regardless of the reason for diminished performance, improving endurance is a reasonable exercise goal for patients with low back pain.

Results from several randomized, controlled studies using a variety of types of exercise have demonstrated a positive effect on pain. Frost et al. (Frost H, Klaber Moffett JA, Moser JS, Fairbank JC (1995) noted that an active exercise program consisting of eight sessions over 4 weeks was found to be superior to unsupervised home exercise instruction for pain reduction (38% in the exercise versus 13% in the home exercise group). Torstensen et al. (Torstensen TA, Ljunggren AE, Meed HD, et al (1998). compared an active graded exercise program consisting of three weekly sessions for 12 weeks with conventional physical therapy and an unsupervised walking program. They observed a 30% pain reduction in the active exercise group versus a 23% pain reduction in the physical therapy group and a 9% pain reduction in the walking group at the end of treatment. (Alaranta H, Rytökoski U, Rissanen A, et al.(1994) randomized 378 patients with back pain for less than 6 months and substantial work absences into a 3-week functional restoration program consisting of intensive exercise with educational and behavioral support or a controlled group that received passive physical therapy and low-intensity exercises.

CONCLUSION

In the results it is found that patients who received the neurotherapy treatment to reduce their low back pain. In the above table pre test mean scores are 9.2283 and post test mean scores are 3.000. the standard deviation is 1.00661 and 1.00548. The difference the mean scores are 6.2283 which express the improvement in the low back pain of the patients. While seeing the significance of the difference in the mean scores t test had been conducted and find that t value is 45.307 at .01 level. This is highly significant. Hence it is concluded that neurotherapy treatment is very effective on the pain relief among low back pain patients.

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Even some patients had been also shown poor impact on the pain relief, hence further studies are suggested to see the impact of neurotherapy on pain relief among patients with low back pain and other related pains.

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Conflict of Interest

The author(s) declared no conflict of interest.

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