

ORIGINAL RESEARCH

Evaluation of efficacy of Neural Therapy and Physical Therapy in Chronic Low Back Pain: A comparative study

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ABSTRACT:

Background: To compare the efficacy of Neural Therapy and Physical Therapy in Chronic Low Back Pain.

Materials & methods: A total of 100 patients were enrolled. Random division of the patients was done into two study groups: Group A- Patients who were scheduled to undergo physiotherapy, and Group B- Patients among which previous session of physiotherapy failed to relieve the symptoms. In the physical therapy programme, the lumbar region was heated superficially (using hot packs), deeply (using ultrasound), and analgesically (using transcutaneous electrical nerve stimulation, or TENS). The physical therapy program was applied five times a week for three weeks. Among patients of group B, neural therapy (NT) was carried out. Local injection treatment (1:1 mixture of Lidocaine HCl and saline) for five sessions. Analysis of result was done using SPSS software. **Results:** Among patients of group A, mean VAS at pre-treatment and post-treatment was 7.95 and 4.28 respectively. Among patients of group B, mean VAS at pre-treatment and post-treatment was 7.51 and 4.02 respectively. Non-significant results were obtained while comparing the VAS at both the time intervals in between the two study groups. Among patients of group A, mean RMDQ at pre-treatment and post-treatment was 15.35 and 9.12 respectively. Among patients of group B, mean RMDQ at pre-treatment and post-treatment was 16.12 and 8.92 respectively. Non-significant results were obtained while comparing the RMDQ at both the time intervals in between the two study groups. **Conclusion:** Among patients with chronic low back pain, both of Neural therapy and physiotherapy are effective.

Key words: Neural therapy, Physical therapy, Chronic low back pain

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INTRODUCTION

Back pain is one of the most common causes for patients to seek medical care in both primary care and emergency setting. An estimated 200 billion dollars are spent annually on the management of back pain. It is the most common reason for workman's compensation and lost work hours and productivity. There is a broad range of potential etiologies for both adult and pediatric populations. The etiologies differ depending on the patient population, but most commonly, it is mechanical or non-specific. Not all back pain is lumbago or paraspinal muscle.¹⁻³

The diagnostic and therapeutic management of patients with low back pain has long been

characterized by considerable variation within and between countries among general practitioners, medical specialists, and other healthcare professionals. Recently, a large number of randomized clinical trials have been done, systematic reviews have been written, and clinical guidelines have become available.^{4, 5} Hence; the present study was undertaken for evaluating and comparing the efficacy of Neural Therapy and Physical Therapy in Chronic Low Back Pain.

MATERIALS & METHODS

The present study was undertaken for evaluating and comparing the efficacy of Neural Therapy and

Physical Therapy in Chronic Low Back Pain. Only those patients were enrolled which had history of low back pain for a minimum of four months. A total of 100 patients were enrolled. Random division of the patients was done into two study groups:

Group A- Patients who were scheduled to undergo physiotherapy,

Group B- Patients among which previous session of physiotherapy failed to relieve the symptoms

The sociodemographic characteristics of the patients were recorded. In the physical therapy programme, the lumbar region was heated superficially (using hot packs), deeply (using ultrasound), and analgesically (using transcutaneous electrical nerve stimulation, or TENS). The physical therapy program was applied five times a week for three weeks. Among patients of group B, neural therapy (NT) was carried out. Local injection treatment (1:1 mixture of Lidocaine HCl and saline) for five sessions. All subjects were evaluated by using Visual Analogue Scale (VAS) for pain on a scale of 0 to 10. The Roland Morris Disability Questionnaire (RMDQ) was used to assess the physical disability in activities of daily living (ADLs) due to LBP. Total score for 24 items was calculated by giving 1 point for the answers of "yes" and 0 point for the answers of "no". Analysis of result was done using SPSS software.

RESULTS

A total of 100 patients were enrolled and were divided into two study groups- Group A and group B. Mean age of the patients of group A and group B was 43.2 years and 40.8 years. There were 35 males and 15 females in group A while there were 38 males and 12 females in group B. Among patients of group A, mean VAS at pre-treatment and post-treatment was 7.95 and 4.28 respectively. Among patients of group B, mean VAS at pre-treatment and post-treatment was 7.51 and 4.02 respectively. Non-significant results were obtained while comparing the VAS at both the time intervals in between the two study groups. Among patients of group A, mean RMDQ at pre-treatment and post-treatment was 15.35 and 9.12 respectively. Among patients of group B, mean RMDQ at pre-treatment and post-treatment was 16.12 and 8.92 respectively. Non-significant results were obtained while comparing the RMDQ at both the time intervals in between the two study groups.

Table 1: Comparison of demographic details

Variable	Group A	Group B
Mean age (years)	43.2	40.8
Males (n)	35	38
Females (n)	15	12
Mean BMI (Kg/m ²)	25.3	25.9

Table 2: Comparison of VAS

Mean VAS	Group A	Group B	p-value
Pre-treatment	7.95	7.51	0.12
Post-treatment	4.28	4.02	0.38

Table 3: Comparison of RMDQ

Mean RMDQ	Group A	Group B	p-value
Pre-treatment	15.35	16.12	0.74
Post-treatment	9.12	8.92	0.65

DISCUSSION

Over 70% of people in developed countries develop low back pain at some time, which usually improves within 2 weeks, however about 10% remained off work and about 20% had persistent symptoms at 1 year. Non-steroidal anti-inflammatory drugs (NSAIDs) may be more effective than placebo at improving pain intensity in people with chronic low back pain. Opioid analgesics (with or without paracetamol) may improve pain and function compared with placebo. However, long-term use of NSAIDs or opioids may be associated with well-recognized adverse effects.⁶⁻¹⁰ Hence; the present study was undertaken for evaluating and comparing the efficacy of Neural Therapy and Physical Therapy in Chronic Low Back Pain.

A total of 100 patients were enrolled and were divided into two study groups- Group A and group B. Mean age of the patients of group A and group B was 43.2 years and 40.8 years. There were 35 males and 15 females in group A while there were 38 males and 12 females in group B. Among patients of group A, mean VAS at pre-treatment and post-treatment was 7.95 and 4.28 respectively. Among patients of group B, mean VAS at pre-treatment and post-treatment was 7.51 and 4.02 respectively. Non-significant results were obtained while comparing the VAS at both the time intervals in between the two study groups. Chambers H et al, in a previous study summarized the available evidence on lumbar facet joint injections and the physiotherapy treatments, land-based lower back mobility exercise, soft tissue massage and lumbar spinal mobilizations for chronic low back pain (CLBP). Using a systematic process, an online electronic search was performed using key words utilizing all available databases and hand searching reference lists. The evidence for lumbar facet joint injections suggested an overall short-term positive effect on CLBP. Their review indicated that lumbar facet joint injections create a short period when pain is reduced. Physiotherapy treatments including land-based lower back mobility exercise and soft tissue massage may be of benefit during this time to improve the longer-term outcomes of patients with CLBP.¹¹

Among patients of group A, mean RMDQ at pre-treatment and post-treatment was 15.35 and 9.12 respectively. Among patients of group B, mean RMDQ at pre-treatment and post-treatment was 16.12 and 8.92 respectively. Non-significant results were obtained while comparing the RMDQ at both the time intervals in between the two study groups. In another study conducted by Dilekçi E et al, authors compared whether there are positive effects of balneotherapy (BT) on pain, quality of life and disability of individuals receiving physical

therapy(PT) for chronic low back pain. Patients were randomized into two groups through a simple randomization in a 1:1 ratio. The clinician and biostatistics expert were blinded. PT group was applied PT, BT + PT group was applied PT + BT. All patients were included in the study for 3 weeks (total of 15 sessions, 5 days per week). All patients applied hot pack, transcutaneous electrical nerve stimulation and ultrasound. Patients in the BT + PT group applied BT in thermo mineralized water pool (20 min at 38-40 °C). Assessments were made using Pain-Visual Analog Scale(VAS), EQ-5D-3 L Scale(EQ5), EQ-VAS, Functional Assessment of Chronic Illness Therapy-Fatigue(FACIT-F), Roland-Morris Disability Questionnaire(RMDQ) and Quebec Back Pain Disability Scale(QBPDS) at the beginning (W0) and end (W3) of treatment. While performing statistical analysis, patients were divided into 3 categories of BMI1(18.5-24.9 kg/m²), BMI2 (25.0-29.9 kg/m²) and BMI3(\geq 30.0 kg/m²). In the BT + PT group, there were increases in the EQ5 and EQ-VAS variables and decreases in all other variables compared to the PT group which were found to be statistically significant (for QBPDS $p < 0.05$, the others $p < 0.01$). The differences in all variables W0 and W3 were at least half reductions and increases which were found to be statistically significant ($p < 0.01$). In terms of BMI, there were significant differences for all groups, especially BMI3 had higher means for all variables apart from EQ5 and EQ-VAS than the other two categories. BMI1 was the BMI category with highest means for EQ5 and EQ-VAS. The Group \times Time interaction was found to be statistically significant for Pain-VAS, EQ5, EQ-VAS, FACIT-F, QBPDS and RMDQ($p < 0.01$). For Pain-VAS, the effect of the Group \times Time \times BMI interaction was found to be statistically significant($p < 0.05$).BT plus PT was more effective than PT.¹²

CONCLUSION

Among patients with chronic low back pain, both of Neural therapy and physiotherapy are effective.

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