

Instegating Pne In Patient Of Algophobic Chronic Low Back Pain

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Case Report

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Abstract

Chronic low back pain is the leading cause of disability and health care usage and is also a common condition requiring Physio therapeutic intervention. The most common symptom in musculoskeletal condition is pain. Pain which lasts for less than a 3 months is called as acute pain which last more is defined as chronic pain. Pain is a complex phenomenon involving both emotional and physical component. Current intervention and approaches are more physical component based which leads to treatment of just physical component. the emotional component usually leads to avoidance the avoidance can be because of fear of pain which is termed as algophobia Pain Neuroscience education is useful approaching treatment of emotional component of pain. pne approach includes explanation of pain using photos images videos or even verbally In this report a 65year-old female came with complaints of chronic low back pain for 6 months the p ain was present on the left side. Intervention used is pain neuroscience education to chronic low back pain. The report represents the effectiveness of PNE with the conventional mode of treatment is useful in the treatment of chronic low back pain. The results demonstrated improvement in quality of life and reduced fear and catastrophization.

Introduction

IASP defines pain as "an unpleasant sensory and emotional experience associated with, or resembling that associated with actual or potential tissue damage"[1].

Based on duration pain is classified as acute pain, which is of sudden onset, occurs immediately after an injury, and is usually severe. Chronic pain is a pain that continues beyond the normal healing process. It can start as acute pain but lasts for more than 3 months. Episodic or recurrent pain occurs intermittently over a long period and the patient can be pain-free in-between episodes. Breakthrough pain is an exacerbation of pain that are variations in the level of severity of chronic pain [2].

In the near future, 5.0% to 10.0% of cases will develop chronic low back pain (CLBP), which will cause high treatment costs, sick leave, and individual suffering and will be the leading cause for the patient seeking healthcare services [3].

In 2015, the prevalence of chronic low back pain was 4.2% in individuals aged between 24 and 39 years old and 19.6% in those aged between 20 and 59. Aged 18 and above, six reported chronic low back pain, which was between 3.9% and 10.2% of the population [4].

Across the world, it is the leading cause of activity limitation and work absence, imposing a high economic burden on individuals, families, communities, industry, and governments [5].

The mechanism of chronic low back pain is structural abnormalities that occur at spine-associated tissues like disc herniation [6].

Along with these, there is also a psychological perspective psychosocial factors are potentially contributing to emotional distress in patients with chronic low back pain. Factors such as job dissatisfaction, poor social support, and the influence of chronic pain-related behavior on work and family anatomical or dynamics. A key component of pain-related behavior is the fear of pain with a consequent decrease in physical activity [7].

Pain subjective phenomenon involving more cognitive processing rather than a purely sensory phenomenon [8].

As the holistic approach considers the physical or say tissue abnormality structure but not the psychological structure, which forms a reminder of pain treatment, so this case report emphasizes the use of pain neuroscience education. The primary associated factor is the fear of pain and catastrophizing the “pathological fear of pain is defined as algophobia”[9].

Catastrophizing has been broadly defined as an exaggerated negative orientation toward pain stimuli and pain experience. It can also be considered a negative mindset toward pain. Many articles suggest that the exaggerated response of pain is due to catastrophizing. This also often leads to emotional distress in patients [10].

These two components broadly affect patients perception toward pain.

Pain neuroscience education (PNE) helps patients understand more about their pain from a biological and physiological perspective [11].

PNE when used in chronic musculoskeletal (MSK) disorders is effective in reducing pain and improving patient knowledge of pain leads to improving function and lowering disability also enhancing psychosocial factors, enhancing movement, and minimizing healthcare usage. [12].

This case report is of a 60-year female with chronic pain the intervention administered was PNE and a conventional mode of treatment.

Patient information-This case report is reporting a 65-year female complained of low back pain on the left side for 6 months onset was gradual and was dull aching in nature pain gets aggravated during bending activities and is relieved with rest medicines, but the pain was temporarily relieved. Patient’s sleep is normal appetite is reduced patient lives in an urban area on the first floor in a well-ventilated area.

Has a History of Hypertension for 6 years and diabetes for 4 years. The patient is on angiotensin receptor blockers and diuretics for 4 years and metformin for 4 years.

Clinical findings-Pain, when measured on NPRS, was 6 on NPRS at work and 4 on NPRS at rest. Also, scores of fear-avoidance beliefs were FABQw, and were 35 and FABQpa was 18, and score pain-coping inventory was 94 the patient also on observation on forwarding head posture was seen, and lumbar lordosis was present examination piriformis muscle tightness was present. The figure of the 4 test and

slump test was positive. The muscle strength when measured using MRC iliopsoas was 3 gluteus Medius was 3 and gluteus maximus was 3, respectively. All ranges were complete and pain-free ranges were calculated using sober test. Diagnostic assessment- Included Lumbar Anteroposterior and lateral view X-ray revealed the reduced gap between the disc and osteoporotic changes in the spine.

Diagnostic challenges were the socioeconomic status of the patient's family, so cost-effective investigation was taken into consideration and more reliance was on physical findings and Physiotherapeutic assessment.

Table-1 includes day wise protocol of PNE intervention in treatment of pain this protocol includes explanation of pain biology

In figure 1 it, has been represented how PNE was administered to the patient. With PNE ,20 min the transcutaneous electrical nerve stimulation (TENS),20 min moist pack was applied for 7 days also resisted lumbar isometric were applied before the application of exercises stretching of piriformis quadriceps and hamstring was performed 5 repetitions each 30 second hold and 10 second relax.

Follow up and outcomes-Once a week follow-up was arranged. And pain-coping inventory and fear-avoidance beliefs and NPRS scores were taken as outcome measures post 7 days of treatment and during the follow-up visit the scores were reduced the scores were, respectively.

Pain coping inventory-35

Fear-avoidance belief- FABQW-15

FABQpa-7

NPRS-2 on NPRS

Table-2 includes result and day wise scores of outcome measures used

Discussion

Pain is a complex phenomenon, including sensory and emotional components. This study identified the emotional aspect of pain and conducted pain neuroscience education treatment approach. There is ample amount of literature on psychosocial aspects of pain and treatment strategies, but this report precisely concentrated on pain neuroscience education. When pre- and post-outcomes were compared, patients fear pain was reduced, patients fear toward movement was reduced patients' pain-coping behavior was modified and catastrophization was also reduced

overall patient's quality of life was improved. The results suggest that there are positive effects of application of PNE in patients with chronic pain.

The fear-avoidance model explains how PNE is effective in the treatment of low back pain. Avoidance that states that adaptive learning takes place instantly. Either by experience or observation. This leads to conditioned stimuli that generate conditioned response [13].

Chronic pain has pain-related fear and hence avoidance. Pain neuroscience education helps in deconditioning of these stimuli and inhibiting conditioned response generated by the stimuli earlier. Provides patients with actual knowledge of pain and helps improve the quality of life [14-16]. Pain-related avoidance leads to exaggeration of symptoms which is nothing but catastrophization the factors leading to pain-related avoidance is influenced by factors like fear of pain which is termed as algophobia and fear of movement which is termed as kinesophobia along with all these factors the perceived social support are also a leading cause of avoidance due to loneliness contribute to pain response these all factors are treatably using PNE as an approach is useful in treatment of emotional component of pain.

Patient perspective-Patient was satisfied with therapeutic outcomes.

Declarations

Informed consent

-Informed consent was taken from the patient.

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Tables

Visits	Treatment	Duration
1st	The explanation about the anatomy of lumbar region in the patients own language Explains how the lumbar spine works during daily functional activities like forward bending, side flexion and lifting of weights. (With artificial model of lumbar spine)	30 min
2nd	The counseling of the patient: the pain you are experiencing is a way of communication. Your body is trying to communicate with you. Explain pain pathways Explaining what could be the common causes of LBP	30 min
3rd	Explaining diagrammatic representation of lumbar spine to help the patient to better understand his or her pain.	30 min
4th	Correcting the myths related to LBP (we resolve some common and helpful and negative beliefs about LBP) 1. You can't prevent low back pain. 2. The more you use your spine, the more it will hurt. 3. In order to protect your spine you should never bend forward.	30 min
5th	We used certain affirmations and asked the patient to use them as affirmative self-talk I know my pain and effective ways to deal with it. My pain is within my control Pain is not my enemy. Having pain doesn't mean something is wrong with my body. I shall continue to bend forward. (Of course, with certain modifications)	30 min
6th	Including the positive pain-coping strategies and helpful pain beliefs that will increase their participation 1. My body is my responsibility and I shall take care of it. 2. Movements and exercises (which are done with certain modification). Are helping me get better. 3. Im going to actively participate in my treatment sessions. (I'll not rely only on passive treatment options)	30 min

Table-1 Explanation of PNE intervention is provided in Table the same Intervention was given to the patient as described in table.

Day	Pain on NPRS	Pain coping inventory score	Fear avoidance beliefscore-q	FEAR AVOIDANCE BELIF SCORE q-pa
1.	6	94	35	18
2.	5	86	30	16
3.	4	74	27	12
4.	4	65	24	10
5.	3	43	22	8
6.	3	38	21	7
7.	2	35	15	7

Table 2 comprises daily scores of outcome measures used in the study.

Figures

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Figure 1

Legend not included with this version