

COMPARISON BETWEEN MOBILIZATIONS WITH TRACTION AND MOBILIZATIONS WITHOUT TRACTION IN MANAGEMENT OF CHRONIC NECK PAIN

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ABSTRACT

Background: Neck pain is defined as: the pain that occur in posterior region of cervical spine and mainly it affects the area between superior nuchal line to first thoracic vertebrae and it may or may not radiate to head, trunk and upper limb. Neck pain is sensation of discomfort and hyperalgesic to skin, ligaments and muscles on palpation and involve movements of both active and passive in area of neck and shoulder region. Neck pain is classified into three categories on basis of its duration. 1 acute neck pain: pain in neck that lasts for less than 7 days. 2subacute neck pain: neck pain that remains for more than 7 days and less than three months. 3chronic neck pain: neck pain that has duration of three months and more. **Objective:** The objective of the study was to determine the effects of mobilizations with traction versus mobilizations without traction in the management of chronic neck pain. **Study Design:** Quasi experimental study (RCT). **Setting:** The project was conducted in the Physiotherapy Department of Fatima Memorial Hospital (FMH) located in Lahore, Pakistan. **Period:** Feb 2018 to Aug 2018. **Material and Method:** Selected patients were randomly allocated into 2 groups i.e. Group A and Group B. Each group consisted of 20 patients. The mobilization with traction was applied in group A and mobilization without traction in group B. The duration of the treatment was 3 weeks with 4 sessions per week. The outcomes of the study were assessed by NPRS and NDI at the baseline, and after completion of 6 weeks exercise program. **Results:** All the 20 patients in group A were diagnosed with neck pain and were managed with mobilization without traction and all the 20 patients in group B were diagnosed with neck pain and were managed with mobilization with traction. The clinical examination at the end of treatment session (3 to 4 weeks) revealed; maximum patients of group B have been recovered fast and became much better with the treatment of mobilization with traction as compared to group A patients who were given mobilization without traction. **Conclusion:** In conclusion, the present quasi experimental study provided evidence to support the use of mobilization with traction in comparison with mobilization without traction in improving range of motion and decreasing the pain in patients with neck pain.

Key words: Mobilization, traction, chronic neck pain

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INTRODUCTION

Neck pain is defined as: the pain that occur in posterior region of cervical spine and mainly it affects the area between superior nuchal line to first thoracic vertebrae and it may or may not radiate to head, trunk and upper limb.¹ neck pain is sensation of discomfort and hyperalgesic to

skin, ligaments and muscles on palpation and involve movements of both active and passive in area of neck and shoulder region. Neck pain is classified into three categories on basis of its duration. 1. acute neck pain: pain in neck that lasts for less than 7 days. 2. subacute neck pain: neck pain that remains for more than 7 days and less

than three months. 3 chronic neck pain: neck pain that has duration of three months and more.

Neck pain is so common musculoskeletal disease now days. It is thought that almost 1 in 3 persons are affected by neck pain once in a year mainly women. This pain becomes chronic in 1 out of 10 persons if the person experience recurrent neck pain. Prevalence of neck pain is higher in office workers than in general population. Chronic neck pain involves 60% to 80% working community and incidence is higher in women(15%) and in men(9%) and women have this highest incidence at age of 45 and men at age of 60.²

The risk of chronic pain increases with age. This problem persist in people with already had back pain or slipped disk. Many factors play important role in neck pain such as age, sex, occupation and smoking. Neck pain is caused by muscles that can be strained by poor posture, by working on computer, by leaning over workbench, by headache, by worn joints like in osteoarthritis, by nerve compression, by whiplash injuries, by cervical spondylotic myelopathy and many diseases like meningitis and cancer.³ Factors that lead to chronicity are fear, catastrophizing, anxiety and depression. People who experience neck pain are more prone to anxiety, depression and psychological distress.⁴

There are different kinds of neck pains and if it is present in specific area then it is called 'axial neck pain'. Pain that radiates is called radicular pain. Sometimes neck pain is sign of medical emergencies like nerve problems, after an accident, loss of bladder and bowel. If no specific cause can be found then it is called non specific neck pain. Sometimes it is hard to determine the cause of chronic neck pain.⁵

This disease was not much prevalent in past but now it is increasing. if not treated right then this pain lead to many complications like headache, arm pains and difficulty in walking and severe outcome will be an impairment.⁶ Neck pain is

fourth main reason of disability and prevalence rate is exceeding 30% annually. sometimes neck pain resolve itself after sometime but 50% people experience pain or occurrence of this.⁷

Treatment of neck pain depends on the cause. Analgesics like acetaminophen, NSAID and muscle relaxants are used. Different topical creams and patches are also used by some people. Surgery is indicated if neck pain is because of any disease, cancer, instability. Surgery is not indicated for mechanical cause of neck pain and until spinal compression is the cause. Conservative treatment like exercise, joint mobilization is proved to be very effective in both acute and chronic neck pain.⁸

Neck pain is becoming very common day by day and it causes functional limitation in person's life so it is one of very important condition which is not lethal but rather makes a person functional dependent. Being a physiotherapist my job is to make people independent so I took this topic because it is common disease, patients are easily available in our physiotherapy department, and guidelines are available by physical therapist of our department.

MATERIAL AND METHODS

Study Design:

Quasi experimental study (RCT).

Study Setting:

The project was conducted in the Physiotherapy Department of Fatima Memorial Hospital (FMH) located in Lahore, Pakistan.

Study Duration:

The duration of study was 2 months after the approval of synopsis.

Sample size:

20 cases in each group.

4.5. Sampling Technique:

Convenient (non-probability) sampling.

Sample Selection:

OPD cases attending Physiotherapy Department of FMH.

Inclusion Criteria:

- 1 Patients aged between 25 to 50 years.
- 2 At least two of the following diagnostic tests were carried to be positive which include "Spurling's compression test" and "distraction test".
- 3 Having mild to moderate VAS reading scale.
- 4 Duration of symptoms: 12 weeks or more.

Exclusion Criteria:

- 1 Red flag signs such as intraspinal or extraspinal tumors, metabolic disease, osteoporosis, spinal compression, fracture of spine or upper limb, prolonged history of use of steroids, pregnancy, other co-morbidities such as uncontrolled hypertension, SLE, RA, diabetes etc.
- 2 Patients using steroids, opiates and psychological medicines.

Sample Size Calculation:

Selected patients were randomly allocated into 2 groups i.e. Group A and Group B. Each group was consisting of 20 patients. The mobilization with traction was applied in group A and mobilization without traction in group B. The duration of the study was 3 weeks with 4 sessions per week. The outcomes of the study was assessed by NPRS and NDI at the baseline, and after completion of 6 weeks exercise program.

Recruitment:

Recruitment was done by the principal investigator (AM). All those having neck pain patients who were getting treatment at physiotherapy department of Fatima Memorial Hospital (FMH) and meet the inclusion criteria and were willing to participate in the study were given a written consent form after reading the patient information sheet.

Data Collection:

The study will be approved from the institutional review board of Fatima Memorial System. The cases that fulfill the inclusion and exclusion criteria will be registered. The Sociodemographic profile of the cases will be recorded which will include name, age, gender etc. An informed consent will be obtained from

the patient to be studied. The current symptoms will be explored regarding types, sites, duration, severity and extent. The cases will be examined to record the positive signs. The subjects will be investigated for lab tests of routine like blood, urine and X-ray. Special tests will also be carried out. All this information will be recorded in a specifically designed proforma.

4.10. Data Analysis:

All the data will be analyzed by using SPSS version 20.0. Numerical data will be reported as mean \pm SD, while categorical data as frequencies and percentages. Chi-square will be used to detect significance association between different qualitative variables. Paired t-test will be applied at 95% level significance to determine the statistical difference between two groups. $P \leq 0.05$ will be considered as significant.

1. Ethical Approval and Confidentiality:

All aspects of the project protocol, including access to and the use of demographic and clinical information of patients will be authorized by institutional review board of F.M.S. Information on individuals will be kept confidential and used for clinical research only.

RESULTS

All the 20 patients in group A were diagnosed with neck pain and were managed with mobilization without traction and all the 20 patients in group B were diagnosed with neck pain and were managed with mobilization with traction. The clinical examination at the end of treatment session (3 to 4 weeks) revealed; maximum patients of group B have been recovered fast and became much better with the treatment of mobilization with traction as compared to group A patients who were given mobilization without traction.

CONCLUSION


In conclusion, the present quasi experimental study provided evidence to support the use of



mobilization with traction in comparison with mobilization without traction in improving range of motion and decreasing the pain in patients with neck pain.

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AUTHORSHIP AND CONTRIBUTION DECLARATION			
Sr. #	Author's Full Name	Contribution to the paper	Author's Signature
1	Mehwish Saghir	Writing/Data collection/Data analysis	
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