

EFFECTIVENESS OF ACTIVE RELEASE TECHNIQUE VERSUS CONVENTIONAL PHYSIOTHERAPY IN UPPER CROSS SYNDROME

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Abstract-

BACKGROUND:

In upper cross syndrome (UCS), weaker neck flexors, anterior and middle serratus and lower trapezius along with rhomboids usually develop, and tightness of the levator scapulae, pectoralis major and upper trapezius are biomechanically adapted. UCS and neck pain is common with uncomfortable job postures as well as in stress and anxiety.

AIM:

Aim of the study is to analysis the effects of Active release technique versus Conventional physiotherapy in upper cross syndrome.

OBJECTIVE:

This study is to examine the effect of Active release technique versus Conventional physiotherapy on Upper cross syndrome.

METHODS AND MATERIALS:

The subjects with age 21-35 years were taken as subject in the study. All subjects were randomly divided into two group A and B with 15 subjects in each group. Group A Active release technique and Group B Conventional physiotherapy were given.

RESULT:

Result will be revealed at the end of the study.

Keywords: Active release technique, Conventional physiotherapy, Visual pain scale.

INTRODUCTION

Upper cross syndrome is becoming more prevalent in today's population. It develops because of imbalances among muscles and its motor control.

The upper cross syndrome is defined as tightness of the upper trapezius, pectoralis major, and levator scapulae and weakness of the rhomboids, serratus anterior, middle and lower trapezius, and the deep neck flexors (Rectus Capitus Anterior, Rectus Capitus Lateralis, Longus Capitus, Longus Colli) and the scalene muscles. Janda named this syndrome "Upper Crossed" because when the weakened and shortened muscles are connected in the upper body, they form a cross.

Upper-cross syndrome (UCS) is also referred to as proximal or shoulder girdle crossed syndrome. In UCS, tightness of the upper trapezius and levator scapula on the dorsal side crosses with tightness of the pectoralis major and minor. Weakness of the deep cervical flexors ventrally crosses with weakness of the middle and lower trapezius. This pattern of imbalance creates joint dysfunction, particularly at the atlanto-occipital joint, C4-C5 segment, cervicothoracic joint, glenohumeral joint, and T4-T5 segment.

METHODOLOGY

The study belongs to experimental comparative in nature. The study was conducted at outpatient department of cherran's college of physiotherapy. 30 subjects and 15 in each group by random sampling technique. The procedure was explained to subject. Group A received Active release technique and Group B received Conventional physiotherapy were given. The pre & post test were analysed by using Visual analogue scale, The Inclusion criteria are Both genders, Age group of 21 to 35 years, Mechanical neck pain, Any profession With or without radiating pain in upper extremities. The Exclusion criteria are Cervical instability, Cord compression, Spinal tumours, Spinal infections, Debilitating Cardio vascular diseases, Severe osteoporosis, Cervical myelopathy, Ligamentous instability, Vertebral artery insufficiency, Patients on Analgesics, Patients on Anti-inflammatory drugs.

PROCEDURE

The subjects were explained about the study screened inclusion and exclusion criteria. The purpose of the study was explained to them and informed consent was obtained. The subjects were randomly assigned into Group A and Group B. The subjects in the Group A were treated with Active release technique and The subjects in the Group B were treated with Conventional physiotherapy The subjects are treated for 3 days a week for 6 weeks each therapy session lasting for about 45mins.

Active Release Technique includes Static Stretching For levator scapulae, sternocleidomastoid, pectoralis, upper trapezius, rhomboids, scalene for 15-20 sec on each side, with 2-3 reps. Repeat stretching 2, 3 times per session.

Conventional physiotherapy includes Cervical Nod exercise 10 – 15reps like 2-3 sets, Resistance band rowing exercise for each muscles 10 – 15reps like 2-3 sets on both sides, sitting and sleeping posture advised for maintain the spine alignment.

RESULTS

Group A

Active Release Technique

While comparing the pre & post test values of the group using T test the calculate value is 14.68.

When comparing the mean value of both the post test mean value 3.2 which is lesser than pre test mean value 7.2 it confirms that there is a statistically significant ($p<0.18$) improvement in post test group than pre test group.

Group B

Conventional physiotherapy

While comparing the pre & post test values of the group using T test the calculate value is 13.33.

When comparing the mean value of both the post test mean value 3.2 which is lesser than pre test mean value 4.6 it confirms that there is a statistically significant ($p<0.05$) improvement in post test group than pre test group.

DISCUSSION

The visual analogue scale is unidimensional measure of pain intensity. The VAS is a continuous scale comprised of a horizontal line usually 10 centimeter in length anchored by 3 verbal descriptors and they are anchored by

- No Pain
- Moderate pain
- severe pain.

This study will be to evaluate effects of the active release technique in upper crossed syndrome and also to compare the effects of active release technique with the conventional physiotherapy treatment. According to the previous studies the effects of conventional physiotherapy in management for the upper cross syndrome is proven, but to our knowledge, this will be the first study to compare the effects of active release technique with the conventional physiotherapy among UCS patients. More over this study will employ well established and widely used methods with appropriate reliability and validity to assess the pain and the length of muscle. The limitation of the study would be the active release technique may not be effective as conventional physiotherapy treatment in UCS patients to help in reducing the neck Pain and to improve the cervical ROM of the patients. Therefore, this study intends to compare active release technique and conventional physiotherapy treatment in UCS patients. Hence in this experimental study Active release technique proves it creates significant improvement in scale of pain and neck ROM in the patient population.

LIMITATIONS AND RECOMMENDATIONS

- Number of subjects was small
- Only 3 treatment sessions were conducted
- Long term effects of short duration treatment sessions could not be predicted
- Psychological factors were not considered

- Study can also be carried out for different age groups.
- The study can be carried out for a long-term period
- This study can be compared with any other treatment techniques
- Previous trauma and surgical history to be valued.

CONCLUSION

The study concluded that the active release technique seemed to be beneficial in improving the neck ROM and reducing the pain.

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