

The short-term effects of cervical traction on neck mobility (flexion and extension) in patients with cervical spondylosis

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Abstract

Objective of the study: To determine the short-term effects of cervical traction on neck mobility (flexion and extension) in patients with cervical spondylosis.

Material and methods: A descriptive study was conducted on 30 patients with cervical spondylosis. The study was conducted in the Department of Allied Health Sciences, University of Sargodha, Pakistan. The study was conducted over a period of 4 weeks. The study was conducted in the Department of Allied Health Sciences, University of Sargodha, Pakistan. The study was conducted over a period of 4 weeks. The study was conducted in the Department of Allied Health Sciences, University of Sargodha, Pakistan. The study was conducted over a period of 4 weeks.

Results: The study found that cervical traction significantly improved neck mobility (flexion and extension) in patients with cervical spondylosis. The study found that cervical traction significantly improved neck mobility (flexion and extension) in patients with cervical spondylosis. The study found that cervical traction significantly improved neck mobility (flexion and extension) in patients with cervical spondylosis. The study found that cervical traction significantly improved neck mobility (flexion and extension) in patients with cervical spondylosis.

Conclusion: Cervical traction is an effective treatment for improving neck mobility (flexion and extension) in patients with cervical spondylosis. Cervical traction is an effective treatment for improving neck mobility (flexion and extension) in patients with cervical spondylosis. Cervical traction is an effective treatment for improving neck mobility (flexion and extension) in patients with cervical spondylosis. Cervical traction is an effective treatment for improving neck mobility (flexion and extension) in patients with cervical spondylosis.

Keywords: Cervical spondylosis, Manual traction, Intermittent cervical traction, Sustained cervical traction

Introduction

Vertebrae, alongside intervertebral discs, create the vertebral segment, or spine, from the skull to the coccyx incorporating cervical, thoracic, lumbar and sacral areas. The cervical region contains seven vertebrae (C1-C7) [1]. The atypical vertebrae found C1, known as "ATLAS" includes both a vertebral body and a spinous process. The articular aspects contact the occipital condyles of the skull and the sub-par features explain features of C2. C2, called "pivot", contains two transverse masses to explain with C1, a body, to transmit weight through C3 and it contains a long spinous process called as "vertebra prominens" [2]. Vertebrae comprise of a vertebral body, a vertebral curve. These transverse foramina enclose the vertebral courses and veins. Cervical vertebrae specific is the pedicle spinous process which may serve to expand surface territory for muscle connection [3]. The meningeal branches of spinal nerves innervate all vertebrae. Cervical vertebrae provide points of attachment for numerous muscles that include erector spinae, interspinae, intertransversarii, levator scapulae, multius, obliquus capitis, rectus capitis, rhomboid minor, rotators, semispinalis, splenius capitis, and trapezius [4].

Chronic neck pain is either a mechanical or degenerative issue. Degenerative causes involve intervertebral discs and adjacent areas with the formation of osteophyte along stiffness or neurological complications [5]. "Non-specific (simple) neck pain," with postural or mechanical related symptoms. Etiological factors are multifactorial, including poor posture, anxiety, depression, and neck strain sporting and also include occupational activities and Whiplash related injury [5]. Cervical spondylosis is a mechanical generalized disease

process affecting all levels of the cervical spine [6] with a sequence of degenerative changes in the intervertebral discs, osteophytosis of the vertebral bodies, hypertrophy of the facets and laminal arches, and ligamentous and segmental instability [7]. It is a common cause of nontraumatic myelopathy, resulting in paraparesis and quadriparesis [8]. The occurrence rate of bulge or herniation at C3-C4, C4-C5, C5-C6, and C6-C7 increased with aging [9]. Cervical spondylosis is a disorder for age-related wear affecting the disks and vertebrae of cervical spine [6] when morphologic sequelae are superimposed on a developmentally narrow spinal canal. The two clinical syndromes of spondylitis radiculopathy and myelopathy are distinct, yet they may overlap [10]. Incidence of cervical spondylosis is proportional to the progress of age [9]. Cervical pain aggravated by movement Referred pain (occiput, between the shoulders blades, upper limbs), Retro-orbital or temporal pain (from C1 to C2), Cervical stiffness reversible or irreversible Vague numbness, tingling or weakness in upper limbs, Dizziness or vertigo, Poor balance Rarely syncope, triggers migraine, pseudo-angina [11].

In 2005, case of a consecutive series of patients presenting to physical therapy with cervical radiculopathy and managed with the

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use of manual physical therapy, cervical traction and strengthening exercises. Eleven consecutive patients (mean age, 51.7 years; SD, 8.2) who presented with cervical radiculopathy were treated with manual physical therapy, cervical traction, and strengthening exercises of the deep neck flexors and scapulothoracic muscles. With completed self-report measures of pain and function, including a numeric pain rating scale (NPRS), the Neck Disability Index (NDI) and the Patient-Specific Functional Scale (PSFS). At a 6-month follow-up session 91% demonstrated a clinically meaningful improvement in pain and function following a physical therapy visits and at the 6-month follow-up [12].

In 2008, Forty-two patients with at least 6 weeks of non-specific neck pain were selected for the study. Data about demographic characteristics including age, sex, body mass index, duration of cervical pain, working status, smoking status and regular exercise were recorded. Each patient was randomly assigned to Group 1—receiving only standard physical therapy including hot pack, ultrasound therapy and exercise program and Group 2—treated with traction therapy in addition to standard physical therapy. The patients were reevaluated at the end of the therapy. The main outcome measures of the treatment were pain intensity by visual analog scale (VAS), disability by neck disability index (NDI) and quality of life assessed by Nottingham Health Profile (NHP). There were 21 patients in both groups 24 females and 18 males. No correlation was observed between clinical variables and age and duration of disease. So, the conclusion of the study was that no specific effect of traction over standard physiotherapeutic interventions was observed in adults with chronic neck pain and they suggest that the clinicians consider this condition and to focus on exercise therapy in the management of patients suffering from this condition [13].

Material and Methods

The Quasi experimental study was implemented. The setting of study was Rehabilitation centers in Sargodha city. Effects of study were measured in 6 months, from August 1, 2018 to January 31, 2019.

The population of study was patients that visited rehabilitation clinics for seeking treatment for neck pain (cervical spondylosis). A sample of 30 patients fulfilling inclusion and exclusion criteria was selected and divided into two groups by "Lottery sampling method". Sample was selected by convenient sample collecting techniques by following inclusion and exclusion criteria.

Inclusion criteria

- Cervical spondylosis
- Both male and female gender
- Age between 20-50 years
- Acute and chronic neck pain

Exclusion criteria

- Traumatic neck pain
- Whiplash injury
- Tumors
- Disc disorder with radiation

Methodology

Study was conducted in population of Sargodha, seeking physiotherapy treatment for neck pain in physiotherapy rehabilitation

departments and centers. Study was randomized controlled and multicentered. 30 patients were selected by inclusion and exclusion criteria and were divided randomly into two groups. Group 1 obtained manual intermittent cervical traction. Group 2 obtained sustained cervical traction. Duration of study was 6 months. Intervention was short term (one session only). A baseline measurement was taken on



Figure 1: Manual traction exercise

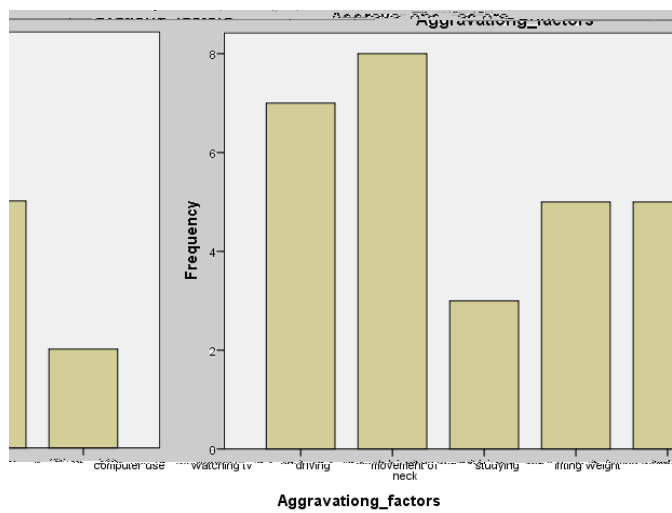


Figure 2: Aggravating factors

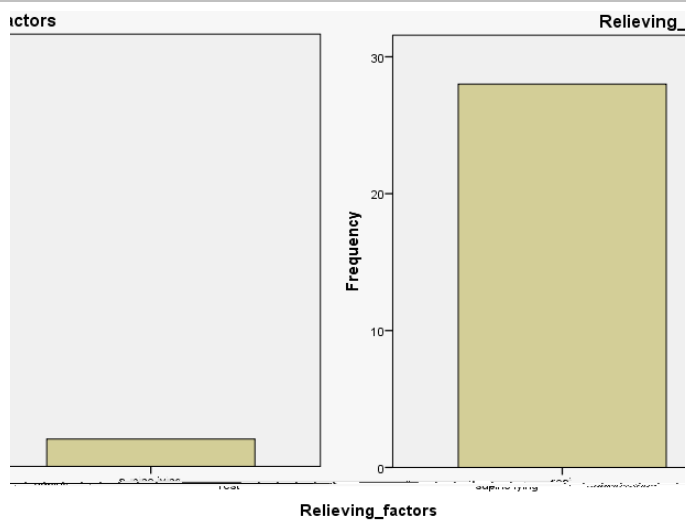


Figure 3: Relieving factors

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