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"EFFECTIVENESS OF KINESIO TAPING IN SPASTICITY & FINE MOTOR HAND FUNCTIONING IN PERSON WITH SPINAL CORD INJURY."

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ABSTRACT

Background: Tenodesis function is used to facilitates grasp in tetraplegia by shorteningand tightening of the flexor digitorum superficialis. Lower motor neuron damage affects its development. Kinesiotaping improves sensory inputs and reduce spasticity, but its effectiveness in SCI has not been studied. Our objective was to investigate its impact on hand function and spasticity in SCI patients.

Objective:-To find out the effect of kinesiotaping on tenodesis grasp as well as on spasticity and fine motor hand function in a person with spinal cord injury

Methodology: Convenient Sampling was done for 10 SCI participants and then they were randomly divided into 2 groups, Group A and Group B. Group A was a conventional group in which hand activities were given and Group B was an experimental group, where hand activities along with kinesiotaping were given. Hand function was measured using the Modified Ashworth Scale, Sollerman Hand Function Scale,and Action Research Arm Test

Result: According to the results, there was a significant difference between the post- mean values of GROUP A and GROUP B in the MAS pvalue (0.05), which indicated that there was a substantial difference in the ARAT scale pvalue (0.0315) and an extremely significant difference in the SHFT scale pvalue (0.04).

Conclusion: This study concluded that a 4- Week Kinesiotaping applied in both the Flexor and Extensor Aspect of the Hand with Conventional Exercise Protocol was moreeffective than conventional exercises alone on Spasticity and Fine Motor function in Persons with SCI, as there was significant differences found in Between groups for thescores of MAS, ARAT, SHFT.

Keywords: Kinesiotaping, Tenodesis, MAS, action research arm test, sollerman hand function test.

ABBREVATIONS -

1. MAS- MODIFIED ASHWORTH SCALE
2. ARAT- ACTION RESEARCH ARM TEST
3. SHFT- SOLLERMAN HAND FUNCTION TEST
4. SCI- SPINAL CORD INJURY
5. KT- KINESIOTAPING

INTRODUCTION

A **spinal cord injury** (SCI) is damage to the tight bundle of cells and nervesthat sends and receives signals from the brain to and from the rest of the body. The spinal cord extends from the lower part of the brain down through the lower back.[9] SCI can be caused by direct injury to the spinal cord itself or from damage to thetissue and bones (vertebrae) that surround the spinal cord. This damage can cause temporary or permanent changes in sensation, movement, strength, and bodyfunctions below the site of injury.

The exact mechanisms underlying the development of spasticity are not fully understood. Studies of patients with central paresis (upper motor neuron syndromes) and spasticity indicate that the monosynaptic reflex response to stretch is enhanced, whereas the long-latency (polysynaptic) stretch reflex appears to be reduced in strength.

Spinal cord injury can also be classified as non-traumatic or traumatic. Spinal nerves escape between a pair of vertebrae at each level of the spinal column, branching off from either side of the spinal cord to innervate a particular area of the body. [7]

A myotome is a group of muscles that are innervated by a single spinal nerve, while a dermatome is an area of skin that is innervated by a particular spinal neuron.
[6]

The spinal nerves at that level and below relate to the injured portion of the spinal cord. Injury types include cervical (1–8), thoracic (1–12), lumbar (1–5), sacral (8), and lumbar (1–5). (S1–S5). The lowest level of full feeling and function isreferred to as a person's level of injury. When the spinal cord is damaged (as in thoracic, lumbar, or sacral traumas), paralysis affects only the legs, but tetraplegia affects all four limbs (cervical damage).[5]

It is standard practice to use the American Spinal Injury Association's (ASIA) International

Standards for Neurological Classification of Spinal Cord Injury (ISNCSCI) to record sensory and motor abnormalities following SCI.

Whether the spinal cord is destroyed, all functions below the affected area are lost in a "complete" spinal injury. A spinal cord injury that is "incomplete" has motor or sensory function preserved below the site of the injury. To be considered incomplete, there must still be some feeling or motion in the S4 to S5 innervated regions, such as voluntary contraction of the external anal sphincter. By definition, incomplete injury includes the phenomena known as sacral sparing, in which a certainamount of sensation is preserved in the even though other, higher dermatomes below the location of the lesion may have greater diminished feeling than **Cervical Level of Spinal Cord Injury – Sings AND Symptoms**

Tetraplegia, either complete or incomplete, results from spinal cord injury at the cervical (neck) level (also called quadriplegia). The limited function may still be retained depending on the precise location and intensity of the trauma. Low heart rate, low blood pressure, issues controlling body temperature, and breathing the sacral dermatomes. [5]

Function after complete cervical spinal cord injury [4]		
Level	**Motor Function**	**Respiratory function**
C1–C4	Full paralysis of the limbs	Cannot breathe without mechanical ventilation
C5	Paralysis of the wrists, hands, and triceps	Difficulty coughing, may need help clearing secretions
C6	Paralysis of the wrist flexors, triceps, and hands	
C7–C8	Some hand muscle weakness, difficulty grasping and releasing	

Tenodesis function is used to facilitate grasp in people with tetraplegia who have wrist extension against gravity but no active finger function (C6 Motor Level), active wrist extension passively pulling the fingers and thumb into flexion. Responsible for this mechanism is the volitional shortening and tightening of the flexor digitorum superficialis muscle (FDS) caused by hand positioning.[6] Tenodesis function occurs when the wrist is extended, the fingers and thumb flex into the palm, and then when the wrist is flexed, the fingers and thumb open. Gaining tenodesis function is essential for task performance because objects can be passively held in the palm or between the thumb and index finger.

While upper motor neurons are damaged in SCI, the condition is frequently thought of as a central nervous system disorder; nevertheless, concomitant lower

motor neuron damage can also happen near the site of the injury. Current studies show that the development of tenodesis function is strongly predicted by lower motor neuron damage at the level of lesion to the finger extensors.

The development of tenodesis function may be facilitated by-Constant monitoring of the hand, promotion of healthy muscle tension, and decrease of spasticity that may compromise the hand's balance and functionality.

It is important to avoid stretching the finger flexors excessively during passive movements with the therapist, as well as during functional actions like supporting oneself on extended wrists or transferring. Additionally, reducing hand edema is crucial. For individuals with tetraplegia, it is important to learn how to apply a splint, perform self-stretches, and utilize the tenodesis grasp. Instruction should be provided on how to use the tenodesis grab, apply a splint, and perform self-stretches.

While many splinting and taping techniques have been utilized, none have been proven to be more effective in providing the necessary tenodesis function.[13]

Kinesio taping

Kinesio taping (KT), developed by Kase (1976) is a new application of adhesive taping. It is a thin elastic tape which can be stretched up to 30-40% of its original length and is a applied over or around muscles to provide functional support. In last few years the use of KT has extended among professionals, athletes and patients.[1]

In recent years, increasing cutaneous stimuli through neuromuscular Kinesio Taping (KT) has been proposed to enhance somatosensory inputs. Alexander et al. reported decreased H-reflex amplitude after KT of the trapezius, suggesting that it influences muscle tone. This KT-dependent H-reflex decline indicates that it is inhibitory and adjusts muscle activity through proprioception feedback.[2]

The central nervous system interprets and incorporates increased sensory input from tactile stimulation to create planned movements and determine the movements' necessary programs (feed-forward and feedback control).[1]

Sensorimotor integration is the name given to this process. Stimulation is provided through the skin, fascial tissues are aligned, more space is created by lifting the fascia and soft tissue above the area of pain or inflammation, sensory stimulation is provided to help with or restrict motion, and exudates are directed towards a lymph duct to help with the removal of edema.[1]

The stretch provided to the tape generates a pulling force on the skin by tapping on the skin continuously stimulates cutaneous mechanoreceptors, giving the central nervous system more sensory signals for the processing of information. Moreover, cutaneous stimulation-induced motor neuron threshold decrease would affect the recruitment of the motor unit, which can ease muscular contraction and ultimately increase muscle strength.

Kinesio taping also promotes the contraction of dormant muscles by stretching the skin, which improves the sensory input of the taped area.

KT exerts a stretching force on the skin while enhancing circulation and proprioceptive feedback. The KT enhanced hand dexterity by utilizing one strip on the forearm's extensor muscles from the proximal to the distal sections, according to pilot research enrolling patients who had experienced a

stroke at least six months prior.[3]

Kinesio taping is a sort of rehabilitation therapy used to treat a variety of musculoskeletal and neuromuscular defects. The effectiveness of Kinesio taping inthe adult population with SCI and hand function is unknown due to a lack of relevant evidence. Therefore, the purpose of the present study is to investigate the effect of Kinesio taping along with conventional therapy on hand function in incomplete tetraplegia patients.

NEED FOR THE STUDY

Some studies have suggested that Kinesio taping can improve fine motoractivities but their gap in understanding the effect of the same on the tenodesis grasp hand function. There is not much literature found on the effect of Kinesio taping for improving the hand function in patients with cervical level of spinal cord injury who have the tenodesis grasp. Therefore, the purpose of the study is to investigate effectiveness of Kinesio taping in spasticity & fine motor hand functioning in Person with Spinal Cord Injury.

AIM AND OBJECTIVES

Aim:

To find out effect of Kinesio taping in spasticity & fine motor hand functioning in Person with Spinal Cord Injury.

Objective:

1. To find out effect of Kinesio taping on tenodesis grasp.
2. To find out the effect of Kinesio taping on spasticity and fine motor function.

RESEARCH QUESTION AND HYPOTHESES

RESEARCH QUESTION:

Will there be any effect of Kinesio taping in spasticity and fine motorfunctions in person with cervical level of spinal cord injury?

HYPOTHESES

Null Hypothesis (H0 There was no effect of taping on spasticity and fine motorfunction in cervical level of spinal cord injury.

Alternative Hypothesis (H1): There was effect of taping on spasticity and fine motorfunction in cervical level of spinal cord injury.

MATERIALS AND METHODS

- **Source of Data:** - Smt. Sindhutai Eknathrao Vikhe Patil, Spinal Cord RehabilitationCenter Loni.
- **Study Setting:** Department of Neuro physiotherapy at Dr. APJAK College ofPhysiotherapy, PIMS Loni.
- **Method of Data Collection: -** Primary
- **Study design: -** Cross sectional before after
- **Study Population: -** Patient having a cervical level of injury.
- **Sample Size: -** 10
- **Sampling Method: -** Convenient sampling
- **StudyDuration:-**6months

SELECTION CRITERIA:

Inclusion criteria: -

1. C6, C7, C8, T1 level of spinal cord injury
2. Patient of age group 18yrs-60yrs
3. Males and Females included
4. Muscle tone according to MAS- 2 OR Less than 2
5. Patents that can sit with back support
6. Some functions present in the hand

Exclusion criteria

1. Modified Ashworth scale >2
2. Allergy to tape
3. Open wound to the forearm
4. Scar which has not yet healed
5. A person who had undergone any surgery for the upper limb

OUTCOME MEASURES:

1. Modified Ashworth Scale (Reliability 0.679–0.853)[10]
2. Action Reach Arm Test (ARAT) (Reliability 0.965-0.968)[11]
3. Sollerman Hand Function Scale (Reliability- 0.96-0.98)[12]

PROCEDURE

All the subjects were explained about the study and a written inform consent form was signed by each one of them.

Target population> 18 years of age, both males and females were taken from Pravara Rural Hospital, Loni. Subjects with the cervical level of spinal cord injury (C6 C7 C8 T1) with MAS 2 OR less, with hemodynamically stable, having some movements of the hand, and who were willing to participate, were included in the study. The subjects excluded from the study who es MAS more than 2, those who were allergic to tape and had open wounds on the forearm, and subjects who had undergone any surgery on the upper limb.

The sampling was done for distribution of (Number of participants) into 2groups(Group A- Conventional therapy); (Group B- Kinesio taping + Conventional therapy) Before the intervention, baseline information was collected including demographicdata, data diagnosis, mode of injury, date of injury level of injury, occupation,dominant, and target hand based on inclusion criteria.

For assessment tools Modified Ashworth Scale Action reach arm test Sollermanhand function tests scales will be used before and after the intervention (4 weeks).

Group A- The subjects who were in group A should be assessed before the intervention by using the Modified Ashworth scale, sollerman hand function test, and action reach arm test. They were undergoing an intervention session of 30 minutes, 5days for 4 weeks.

They received conventional therapy for hands such as

- Pebble board activity
- Tieing a shoeless
- Buttoning and unbuttoning a shirt
- Paper cutting.
- Bottle opening and closing.

After 4 weeks same patients were assessed again using the scale

Group B- The application of Kinesio tape was done while sitting comfortably on the table. There should be no hair, no oil or lotions over the skin, and the skin should be completely dry before Kinesio taping. Surgical Spirit, which contains 70% alcohol, cleansed the skin. The length of the measuring tape was taken from the metacarpophalangeal joints to just above the lateral epicondyle of the forearm, after which it will be folded back on itself. One stripe for each finger will be eventually created by making three longitudinal cuts to the folded end (2nd to 5th). Using the fanning technique, Kinesio taping was applied over the muscular bellies of the Extensor compartment of the hand from proximal to distal. From the lateral epicondyle to distal interphalangeal joints, the distal phalanges from a proximal anchor, with 30%-35% tension, and to the distal anchor, the Kinesiotape will be placed. As well as the inhibitory technique was also applied to the flexor compartment of the same hand from distal to proximal in the same fanning type. From lateral epicondyle to distal interphalangeal

joints, with 20%-25% tension. Three days have been spent with the Kinesio tape. Kinesio tape will be taken off after three days, and the region where it has to be applied was left exposed for a full day. It was then utilized for an additional three days. This pattern was followed for four weeks. The client has to undergo 30 minutes of conventional hand therapy for 4 weeks, (5 daysper week) in addition to the Kinesio tape, which included

- Pebble board activity,
- Tieing a shoeless,
- Buttoning and unbuttoning a shirt,
- Paper cutting,
- Bottle opening and closing. [1]

Application of KT on the patient

Application of KT on flexor Compartment of hand.

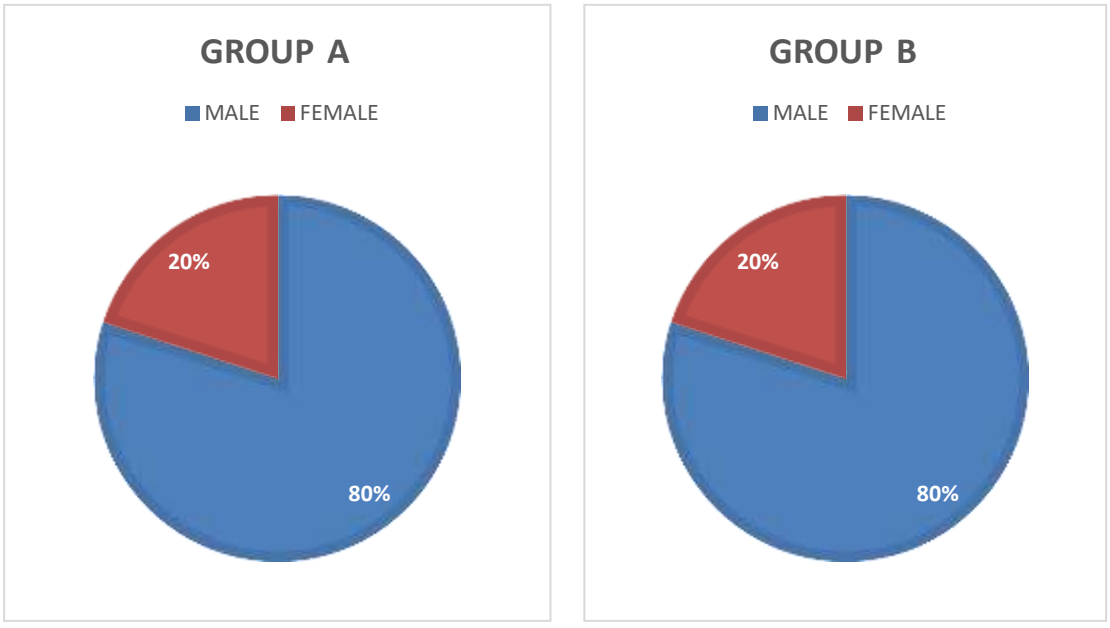
Application of KT on extensor Compartment of hand


Post-intervention photos of a patient who is performing activities.

DATA ANALYSIS AND RESULT

TABLE NO.1:- GENDER DISTRIBUTION OF GROUPA AND GROUP B

GENDER	MALE	FEMALE	TOTAL
GROUP A	4 80%	1 20%	5 100%
GROUP B	4 80%	1 20%	5 100%
TOTAL	8	2	10



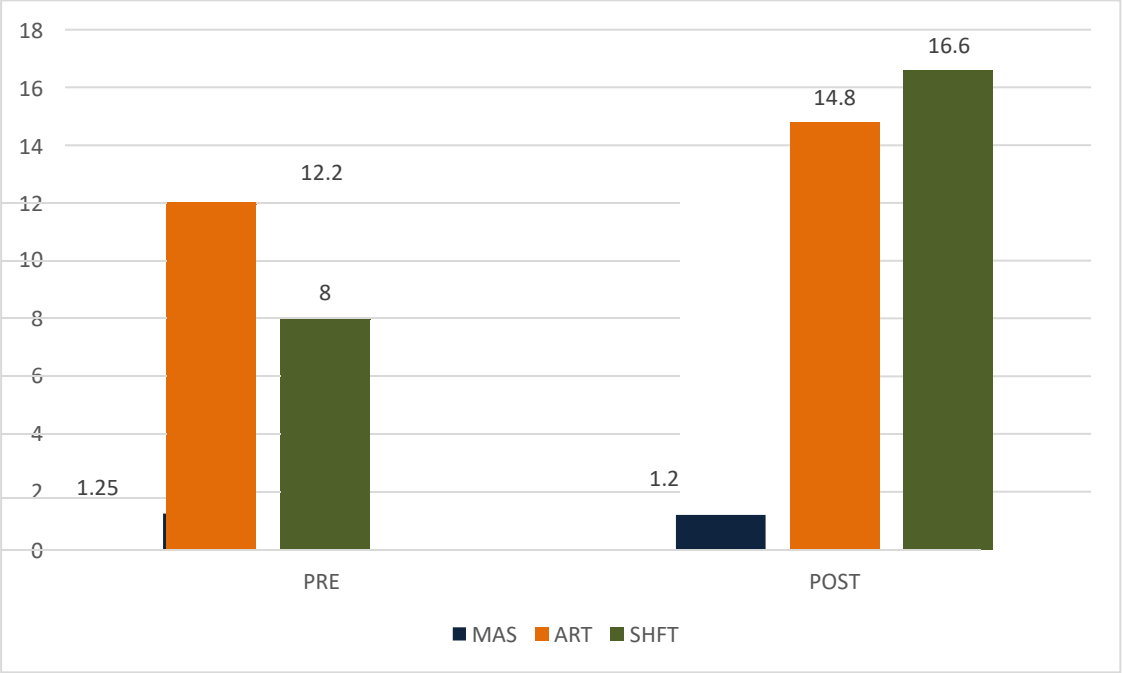
GRAPH NO.1:- GENDER DISTRIBUTION GRAPH IN GROUP A AND GROUP B

INTERPRETATION:- TABLE 1

AND GRAPH 1 shows that out of 10 samples, there were 8 males and 2 females. Group A had 4 males and 1 female and Group B had 4 males and 1 female.

TABLE NO. 2:- COMPARISON BETWEEN PRE AND POST-VALUES OFMAS ARAT SHFT SCALES IN GROUP A

GROUPA	ASSESSMENT	MEAN SD	T VALUE	P VALUE	SIGNIFICANCE
MAS	PRE	1.25±0.45	1	0.187	NOT SIGNIFICANT
	POST	1.2±0.45			
ARAT	PRE	12.2±4.87	3.833	0.0093	VERY SIGNIFICANT
	POST	14.8±5.76			
SHFT	PRE	08±2.65	5.085	0.0035	VERY SIGNIFICANT
	POST	16.6±6.02			

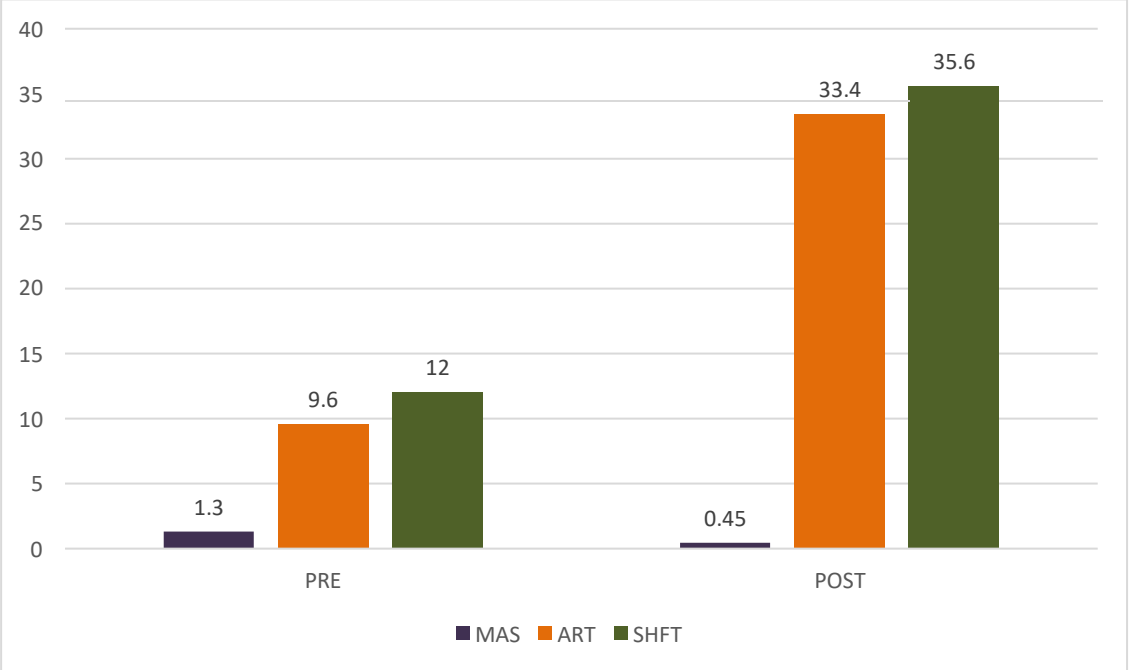


GRAPH NO.2:- COMPARISON BETWEEN PRE AND POST-VALUES OFMAS ARAT SHFT SCALES IN GROUP A

INTERVENTION:- TABLE NO.2 and GRAPH NO.2 show there is no significant difference seen in MAS p-value (0.187), but there is a very significant difference seen in ARAT scale p value(0.0093) as well as this also represent there is very significant difference in SHFT scale p value(0.0035) between pre and post mean values ofGROUP A.

TABLE NO. 3:- COMPARISON BETWEEN PRE AND POST-VALUES OFMAS ARAT SHFT SCALES IN GROUP B.

GROUP A	ASSESSMENT	MEAN SD	T VALUE	P VALUE	SIGNIFICANCE
MAS	PRE	1.3±0.45	6.325	0.0016	VERY SIGNIFICANT
	POST	0.3±0.67			
ARAT	PRE	9.6±8.71	8.785	0.0005	EXTREMELY SIGNIFICANT
	POST	33.4±12.82			
SHFT	PRE	12±11.25	8.759	0.0005	EXTREMELY SIGNIFICANT
	POST	35.6±13.67			

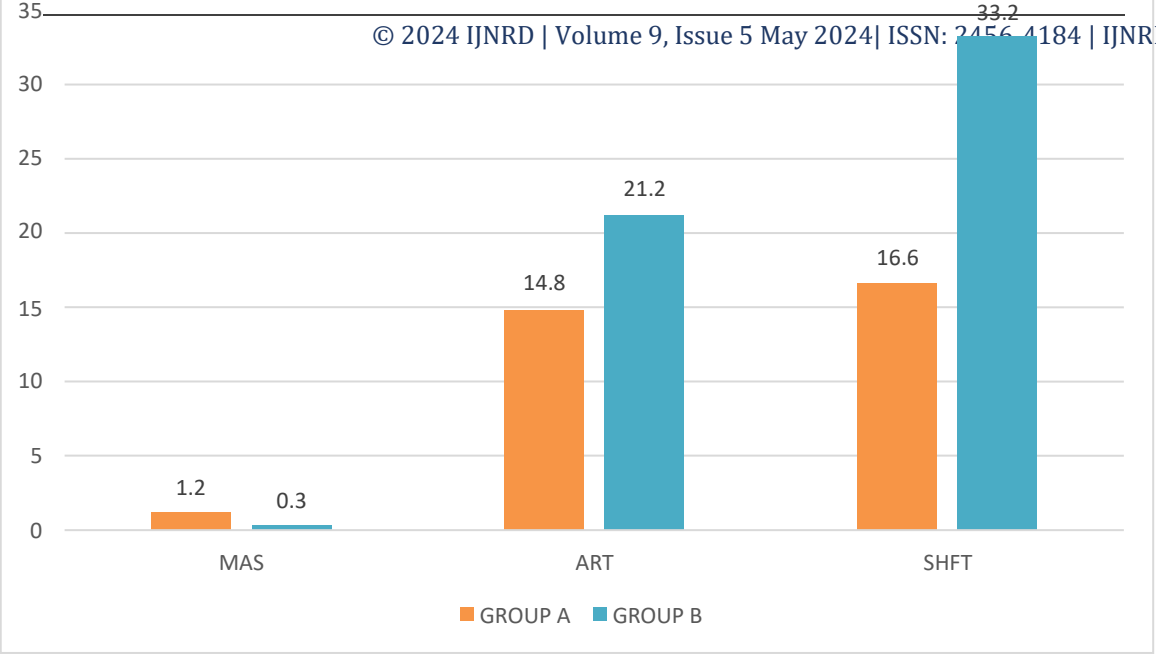


GRAPH NO.3:- COMPARISON BETWEEN MEAN VALUE OF PRE ANDPOST-VALUES OF MAS ART SHFT SCALES IN GROUP B

INTERVENTION:- TABLE NO.3 and GRAPH NO.3 show there is a very significant difference seen in MAS p value (0.0016), as well as this also represent there is extremely significant difference seen in ARAT scale p value(0.0005) and an extremely significant difference in SHFT scale p value(0.0005) between pre and post mean values of GROUP B.

Table no.4:- COMPARISON BETWEEN POST ASSESSMENT VALUES OFMAS ARAT AND SHFT SCALES IN GROUP A AND GROUP B

	GROUP A MEAN±SD	GROUP B MEAN±SD	T VALUE	P VALUE	SIGNIFICANCE
MAS	1.2±0.45	0.3±0.67	2.496	0.05	SIGNIFICANT
ARAT	14.8±5.76	33.4±12.82	2.959	0.0315	SIGNIFICANT
SHFT	16.6±6.6	35.6±13.67	2.844	0.04	SIGNIFICANT



GRAPH NO. 4:- COMPARISON BETWEEN POST ASSESSMENT MEAN VALUES OF MAS ARAT AND SHFT SCALES IN GROUP A AND GROUP B

INTERVENTION:- TABLE NO.4 and GRAPH NO.4 show there is a significant difference seen in MAS p value (0.05), as well as this also represents there is the significant difference seen in ARAT scale p value(0.0315) and an extremely significant difference in SHFT scale p value(0.04) between post mean values ofGROUP A GROUP B.

RESULT

A total of 10SCI subjects participated in the study; these subjects were dividedinto two groups 5 in each group. Characteristics of the participants of both groups are shown in Table 1. from above Table-1, it shows that there is an almost equal distribution of the number of subjects in both the group (male/female 4/1&4/1). Graph pad Instat software was used to do statistical analysis for the current study. Group A and Group B results were compared using the paired t test for intragroup differences in outcome measures, while the intergroup difference was compared using the unpaired t test.

Group A consisted of standard exercises, while Group B included kinesio taping in addition to standard exercises. Table No. 2 indicates that, between the pre and post mean values of Group A, there was no significant variation in the MAS pvalue (0.187); nevertheless, there was a very significant difference in the ARAT scale pvalue (0.0093) and the SHFT scale pvalue (0.0035). Table No. 3 indicates that there was a highly significant difference between the pre and post mean values of Group B in the MAS pvalue (0.0016), as well as in the ARAT scale p value (0.0005) and the SHFT scale pvalue (0.0005). Table No. 4 demonstrates that, between the post mean values of Group A and Group B, there was a significant difference in the MASp value (0.05), which also indicates that there was a significant difference in the ARAT scale pvalue (0.0315) and an extremely significant difference in the SHFT scale p value (0.04).

DISCUSSION

The study investigated the impact of kinesiotaping alongside conventional therapy on spasticity and fine motor hand functioning in spinal cord injury patients over 4 weeks. Conducted at the Smt. Sindhutai Eknathrao Vikhe Patil SCI Rehab Center, Dr APJ Abdul Kalam College of Physiotherapy, Pravara Institute Of Medical Sciences, Loni, the study included 10 patients with cervical spinal cord injury, aged between 20 and 60 years. Patients were randomly assigned to Group A (conventional exercises) or Group B (conventional exercises with kinesiotaping on hand flexors and extensors). Significant improvements were observed in both groups, with Group B showing more pronounced changes in the Modified Ashworth Scale (MAS), Action Research Arm Test (ARAT), and Southampton Hand Function Test (SHFT) scales. Comparison between Group A and Group B post-means demonstrated significant differences across all scales.

Santamato et al.[26] and Huang et al.18 had demonstrated the clinical effect of KT on hand spasticity reduction in stroke patients, provided that KT allows the stretching of the muscles and normalizes muscle tone, thereby allowing sensory feedback between the central and peripheral nervous systems. Spasticity is a common complication in patients with stroke with hemiplegia that hinders motor recovery. In addition to pharmaceutical treatments and regular rehabilitation, several therapeutic interventions have proven clinically effective alone.

In analyzing the effects of KT on hand function, sensory components cannot be dismissed. Applying pressure and stretching the skin with KT can stimulate cutaneous mechanoreceptors and enhance signal information of joint movement or joint position (Hsu et al., 2009) (Riemann and Lephart, 2002)[36]. Applying kinesiology taping from the origin to the muscle insertion point is thought to promote muscular activation, while applying it in the opposite direction has the opposite effect (Kase et al., 2003). On the other hand, it is thought that applying stiff tape across a muscle's belly will reduce its ability to contract (McConnell, 1986, Tobin and Robinson, 2000). According to Alexander et al. (2003), cutaneous afferent stimulation was suggested as a potential mechanism of the kinesiology tape. Taping inhibited the Hoffman (H-) reflex; The H-reflex is an estimate of alpha motoneuron (αMN) excitability when presynaptic inhibition and intrinsic excitability of the αMNs remain constant. This measurement can be used to assess the response of the nervous system to various neurologic conditions, musculoskeletal injuries, application of therapeutic modalities, pain, exercise training, and performance of motor tasks[37]; however, removing the tape facilitated the H-reflex. The study examined the facilitatory or inhibitory effects of taping along the lower fibers of the trapezius. Following the facilitatory and inhibitory taping approaches, the excitability of motor neurons was examined in a subsequent recent study concluded that neither the facilitatory nor the inhibitory methods of the kinesiology taping affected the amplitude of the H-reflex (Yoosefinejad et al., 2017). Overall, some research suggested that cutaneous receptors may be a mechanism for either motor neuron facilitation or inhibition (Bridget et al., 2010, Tobin and Robinson, 2000); other research, however, found that motor neuron inhibition following taping is caused by the muscle spindle (Alexander et al., 2003, Alexander et al., 2008).

Kinesiotaping the soleus and gastrocnemius muscles in an inhibitory pattern was used in a previous study (Federica Tamburella et al., 2014) to assess the effects of neuromuscular tapping on somatosensory inputs in SCI. The study's findings indicated a significant reduction in spasticity. There were also similar studies conducted which show the effect of kinesiotaping in reducing the muscle tone Mario Lopes et al(2021), Mirjavad Tabatabaee et al (2017), Mian wang et al (2019), Yu-Chi HUANG et al (2019)

KT is used to enhance sensory inputs, decreasing spasticity throughproprioception feedback and relieving abnormal muscle tension, in healthy athletic subjects (Thelen et al., 2008; Lin et al., 2011).

Furthermore, Mostaghim et al. (2016)[35] demonstrated 44 healthy collegiate athletes' increased muscular function and motor skills, including maximal voluntary isometric contraction, leaping, and sprint performance, both immediately and 24 hours after facilitatory KT application. In fact, it's interesting that KT can alter the mechanical characteristics of muscles, indicating that it might be used as a supplemental means of controlling muscle tone when hypotonia is present.[25]

Kinesiotaping strengthens the voluntary control of muscle and tendon movement during exercise by improving kinesthetic inputs and encouraging improvedregulation of the forearm and wrist muscles. This improves grip strength and manual skill in the hand, which in turn improves fine motor hand function. In 2006, Yasukawa A et al. assumed that when the Kinesio tape was placed over the forearm muscles (extensors group), covering the metacarpals and phalanges, from their origin (the lateral epicondyle of the humerus) up to the dorsum of the hand. This would have made it easier to achieve therapeutically beneficial improvements in the hands' fine motor skills. In association with Hsu et al. reported, neuromuscular tapping can enhance proprioception, strength, functional activities, control, and placement when used in conjunction with therapeutic procedures. This outcome comes from a study conducted in 2018 by Sujoy Roy[21], Jaya Dixit, et al., which found that using kinesiotape in addition to traditional occupational therapy can help children with spastic diplegic cerebral palsy develop their fine motor skills and become more functionally independent so they can handle the demands of daily life[1].

LIMITATIONS

1. Small sample size or specific inclusion criteria.

2.This study could not investigate long-term effect of kinesiotaping on hand function.3.The stage of injury- subacute, acute, and chronic was not taken into consideration.

FUTURE SCOPE

Suggest avenues for future research, including exploring the long-term effects of kinesiotaping, investigating optimal taping techniques, and considering the impact on various levels of spinal cord injury.

STRENGTHS

The study on kinesiotaping in SCI patients exhibits strengths in its design, outcome measures, statistical rigor, comprehensive discussion, and consideration of both clinical implications and future research directions. These elements collectively contribute to the credibility and potential impact of the study in advancing the understanding of kinesiotaping in SCI rehabilitation.

CONCLUSION

This study concluded that a 4- Week Kinesio Taping applied in both the Flexor and Extensor Aspect of the Hand with Conventional Exercise Protocol is more effective than conventional exercises alone on Spasticity and Fine Motor function in Persons with Spinal Cord Injury, as there were significant differences found in Between groups for the scores of MAS, ARAT, SHFT. This study provides support for the future scope to include the Kinesio Taping applied in both the Flexor and Extensor Aspect of the Hand along with conventional exercises to reduce spasticity and Fine Motor functions on Tenodesis grasp.

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