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RESEARCH ARTICLE

THE EFFECT OF SOMATOSENSORY INPUT BY APPLICATION OF KINESIOTAPING OVER WRIST IN SUBACUTE AND CHRONIC STROKE PATIENTS

Dr. Yogita Kumawat¹, Dr. Anand Misra² and Dr. Deepti Garg³

1. Assistant Professor.
2. Professor.
3. Associate Professor.

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CIMT, Conventional Therapy, Fugal-Meyer Scale, Hemiplegia, Kinesiotaping, Motor Function, Stroke Rehabilitation

Abstract

Background: Post-stroke motor function disability is a common complication in patients with stroke and a key contributor to impaired hand function after stroke: Cerebrovascular accident (CVA) is the second most frequent cause of death in the world. Nevertheless, most victims do survive and need treatment, and hand function is one that has to be dealt with in the rehabilitation process. Kinesio Taping (KT) is a bandaging method that can be applied along the muscle fibers to provide stimulation. Studies have shown its efficacy in providing afferent stimuli to weakened muscles, thus eliciting contraction with greater recruiting of motor units and inducing neuroplasticity.

Objective: The purpose of this study was to investigate the effects of Kinesio taping on managing motor function of wrist motor performance in patients with sub-acute and chronic stroke.

Method: An experimental comparative study design, 30 patients (mean age range 40-66) with stroke and randomized 15 patients in each group, Group A received conventional therapy and group B received kinesiotape with conventional therapy. Both groups were assessed in week 0 (before study) and week 5 (end of study) assessment measures were done using Fugl-Meyer scale and nine-hole peg test.

Results: A total number of 30 patients were included in both the groups. 15 patients were put in Group A and B respectively. For Group A- treated with conventional therapy had undergone test on day 1 (mean of pre-test readings) and after (mean of post-test reading) $t=(p<0.0001)$. For Group B Kinesiotaping of wrist along with Conventional therapy. Total no patients (-M, -F with mean age) had undergone test on day 1 (mean of pre-test) and after (mean of post-test) $t=(p<0.0001)$. This study is to compare the Conventional therapy (mean=) and Conventional therapy with kinesiotaping of wrist (mean=) in chronic stroke Patients with two sample t-test for population mean with 5% level of significance.

Conclusion: The effect of kinesiotaping along with conventional therapy is significantly better result as compare to conventional therapy on reducing spasticity and improving functional disability in patients with motor dysfunction.

Introduction:-

Post-stroke motor function disability is a common complication in patients with stroke and a key contributor to impaired hand function after stroke: Cerebrovascular accident (CVA) is the second most frequent cause of death in the world. Nevertheless, most victims do survive and need treatment, and hand function is one that has to be dealt with in the rehabilitation process. Kinesio Taping (KT) is a bandaging method that can be applied along the muscle fibers to provide stimulation. Studies have shown its efficacy in providing afferent stimuli to weakened muscles, thus eliciting contraction with greater recruiting of motor units and inducing neuroplasticity.

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Reference:-

- 1.Santos, J.C.C., Giorgetti, M.J.S., Torello, E.M., Meneghetti, C.H.Z. and Ordenes, I.E.U. (2010) The Influence of Kinesio Taping in the Treatment of Shoulder's Subluxation at Stroke. Rev Neurocienc , 18, 335-340
- 3.BaeSS, Goo BO, Kim YC, et al.: An introduction to physical therapy, 5th ed. Seoul: Daihaks Publishing, 2003.
- 4.Morris D, Crago JE, DeLuca SC, et al. Constraint-induced movement therapy for motor recovery after stroke. Neurorehabilitation. 1997;9:29-43.
- 5.Liepert J, Miltner WHR, Bauder H, et al. Motor cortex plasticity during constraintinduced movement therapy in stroke patients. NeurosciLett. 1998;250:5-8.
- 6.Patel N, Jankovic J, Hallett M. Sensory aspects of movement disorders. Lancet Neurol 2014;13:10012.[PMC free article][PubMed][Google Scholar]
- 7.Effect of Kinesio Taping on Hand Function in Hemiparetic Patients Jonathan GalvãoTenório Cavalcante¹, Maria doDesterro Costae Silva², JessianeTenório da Fonseca Silva¹, Clarissa Cotrim dos Anjos², RenataSampaio Rodrigues Soutinho^{3*} World Journal of Neuroscience, 2018, 8, 293-302.
- 8.current concepts in muscle stretching for exercise and rehabilitation Quantification of the Upper Extremity Motor Functions of Stroke Patients Using a Smart Nine-Hole Peg Tester ÁkosJobbágy , 1 Anikó Rita Marik,¹ and Gábor Fazekas^{2,3}
- 9.Effects of kinesio taping on hemiplegic hand in patients with upper limb post-stroke spasticity: A randomized controlled pilot study.
- 10.Fugl-Meyer Assessment of Sensor motor Function After StrokeStandardized Training Procedure for Clinical Practice and Clinical Trials.
- 11.<https://nba.uth.tmc.edu>Somatosensory Systems Patrick Dougherty, Ph.D., Department of Anesthesiology and

Pain Medicine, MD Anderson Cancer Center (content provided by ChieyekoTsuchitani, Ph.D.)

12.Morris D, Crago JE, DeLuca SC, et al. Constraint-induced movement therapy for motor recovery after stroke. *Neurorehabilitation*.1997;9:29–43.

13.Stillman BC. The activation or de-activation of receptors for the purpose of developing somatic, autonomic, and mental functions: introduction. Part i- philosophy. *Aus J Physiother*. 1968;14(3):86-92.

14.Somatosensory Deficits After Ischemic Stroke Simon S. Kessner,EckhardSchlemm,BastianCheng,Ulrike Binge,IJensFiehler,ChristianGerloffGötz ,Thomalla<https://doi.org/10.1161/STROKEAHA.118.023750>Stroke. 2019;50:1116–1123.

15.Quantification of the Upper Extremity Motor Functions of Stroke Patients Using a Smart Nine-Hole Peg Tester ÁkosJobbágy , 1 Anikó Rita Marik,1 and Gábor Fazekas2,3 1.