

**ELECTRONIC GUIDE TO THESES APPROVED BY
DEPARTMENT OF BASIC SCIENCE
PREPARED BY NERVEEN ABD EL SALAM ABD EL KADER AHMED
Department of Basic Science**

**Doctoral Degree
2015**

Author	:	Mohamed Moustafa Mohamed Ahmed
Title	:	Influence of Kinesiotapping on Peak Torque and Electrical Activity of Quadriceps Muscle
Dept.	:	Department of Basic Science.
Supervisors	1.	Mohamed Hussein Elgendy
Degree	:	Doctoral.
Year	:	2015.
Abstract	:	
<p>Background: Kinesiotapping (KT) is an elastic tape used for treating sports injuries and other disorders, it was claimed that KT supports injured muscles, joints and relieve pain. Purpose of the study was to investigate the effect of kinesiotaping on electrical activity and peak torque of the dominant quadriceps femoris muscle during concentric and eccentric contraction in healthy subjects. Design: pre test post test control group design. Subjects: two hundred subjects participated in this study. They were divided randomly into two equal groups Group A with a mean age of 25.7 ± 2.1 years. They received kinesiotapping on three heads of quadriceps Vastus Medialis, Vastus Lateralis, Rectus Femoris. Group B with a mean of 25.9 ± 2.31 years. They received placebo kinesiotapping on quadriceps muscle. Methods: Measuring the electrical activity of the three heads of quadriceps using Electromyography, and peak torque of quadriceps using Biodex III isokinetic dynamometer, before tapping, after 10 minutes of tapping, after 24 hours, after 72 hours, and after 5 days (after removal of tape). Results: the VM electrical activity improved in all measurement times, VL improved after 10 min., and rectus femoris increased after 10 min. and 24 hours. The peak torque during concentric muscle contraction (60° and 180°) / sec increased after removal of tape in group A and B, and increased after 10 min during concentric and eccentric contraction at 60° / sec in group A. Conclusion: Kinesiotapping for quadriceps heads from origin to insertion for 5 days can influence the performance of the muscle through progressively increase electrical activity of VM, increase electrical activity of VL after 10 min., and progressively increase electrical activity of RF till 24 hours. But the same kinesiotapping protocol had no effect on the peak torque of quadriceps muscle except after 10 min. of tapping during concentric and eccentric contraction at (60° /sec) and after removal of tape during concentric contraction at (60° /sec, and 180° /sec). So, kinesiotapping could improve muscle performance.</p>		
Key words	1.	Kinesiotapping
	2.	Peak torque
	3.	Electrical activity
	4.	Quadriceps
	5.	
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Author	:	Nesma Ahmed Helmy Ahmed
Title	:	Utilization of Photographic Analysis in Postural Screening for School Adolescent Pupils
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	2.	Mohsen M. El-Sayyad
Degree	:	Doctoral.
Year	:	2015.
Abstract	:	
<p>Background: Adolescent is the nucleus of society to achieve progress. School postural screening was important in understanding of spine deformity. Purpose of this study was to investigate posture and to quantify spinal postural angles for adolescent from standing. Method: 250 adolescent students of both sexes with age ranged from 12 to 18 years old participated in this study. Four digital photographs were taken for each adolescent from anterior, posterior, and both lateral views of standing position. Surgimap spine software used to measure spinal postural angles from each photo. Quantitative values for spinal postural angles with the percentage frequency of inclinations to the left and to the right. Results: The mean of spinal postural angles for right side; gaze angle was $14.9^{\circ} \pm 8.85$, craniovertebral angle (CVA) was $46.7^{\circ} \pm 7.4$, trunk angle was $200.5^{\circ} \pm 10.96$, lumbar angle was $67.06^{\circ} \pm 10.62$, pelvic tilt angle from lateral view was $-7.04^{\circ} \pm 6.3$, and sway angle was $171.7^{\circ} \pm 6.1$. In addition, for left side were $12.5^{\circ} \pm 8.56$, $45.58^{\circ} \pm 6.98$, $202.97^{\circ} \pm 11.1$, $64.35^{\circ} \pm 10.6$, $-7.053^{\circ} \pm 6.51$, and $170.4^{\circ} \pm 6.33$ respectively. The mean of angles from anterior view; Head tilt angle was $1.6^{\circ} \pm 4.27$, shoulder tilt angle was $1.1^{\circ} \pm 2.56$, pelvic tilt from anterior view was $-0.11^{\circ} \pm 2.8$, shoulder on pelvis tilt angle was $1.2^{\circ} \pm 3.63$. The mean of angles from posterior view; scapular tilt angle was $-0.26^{\circ} \pm 3.7$ and pelvic tilt from posterior view was $0.63^{\circ} \pm 3.13$. Conclusion: Small asymmetries were observed in different views of standing. This study suggested that there was no symmetry in postural alignment in standing position. Therefore, photographic assessment of spinal posture recommended done from anterior, posterior and both lateral views of subject to get a complete assessment.</p>		
Key words	1.	Surgimap Spine Software
	2.	Spinal Postural Angles
	3.	Adolescent
	4.	
	5.	
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