

6th International Conference and Exhibition on

Traditional & Alternative Medicine

September 14-16, 2016 Amsterdam, Netherlands

Acute effect of transcutaneous electrical acupoints stimulation on heart rate recovery after the 3-minute step test

Chai-Yi Chou^{1,2}, Hwei-Jhen Wen³ and Boon Suen Ang⁴¹University of Wisconsin-Madison, USA²Tzu Chi General Hospital, Taiwan³Tzu Chi University, Taiwan⁴Universiti Sains Malaysia, Malaysia

Introduction: Transcutaneous Electrical Acupoint Stimulation (TEAS) is a safe standardized non-invasive therapeutic technique to enhance the heart rate regulation in healthy and cardiovascular disease individuals

Purpose: The aim of this study was to assess the acute therapeutic effect of TEAS on recovery heart rate (HR) after exercise.

Methods: Forty-one recreationally active college students were recruited and randomly assigned into either TEAS group (TG) or control group (CG). All participants were required to perform two trials of 3-minute step exercise (3MST) with a break of 30 minutes between trials. For the TG, participants received 10 minutes TEAS treatment on both forearms at the two selected standard acupoints (Nei-Guan [PC6] and Lie-Que [LU7]) for cardiovascular disease before the second trial, while the CG was seated at rest. HR was measured at rest (HR_{rest}), the first (HR₁), second (HR₂) and third-minute (HR₃) of recovery after 3MST. Mixed-models repeated measures method was used to compare differences between the groups ($\alpha = 0.05$).

Results: There were no significant difference in HR_{rest1} and HR_{rest2} between the first and the second 3MST in both groups, as well as between groups.

Groups	HRrest1 (beats/min)	HRrest2 (beats/min)	3MST Fitness Index (Pre-treatment)	3MST Fitness Index (Post treatment)
TG	81 ± 7	82 ± 8	56.93 ± 8.43	58.31 ± 11.80
CG	81 ± 10	82 ± 11	58.31 ± 11.80	58.13 ± 6.09

The calculated 3MST fitness indexes were no significance different between the pre-treatment and the post treatment in both groups.

Conclusion: Although TEAS at PC6 and LU7 has demonstrated it can slowdown the heart rate in tachycardia patients. But in this study, it did not show the effect. We speculate, the timing and duration of TEAS treatment may play important role and its mechanism on enhancing cardiovascular enhancing need to further investigate.

Biography

Chai-Yi Chou earned her MD degree from China Medical University in Taiwan in 2008. She specialized in Acupuncture. After 3 years residency training in Tzu Chi Medical Center, she has experience in treating patients with various diseases, including cardiopulmonary diseases and sports, injuries rehabilitation and recovery. She has great passion and interest in Sports Medicine. She would like to utilize and apply acupuncture in Exercise Science. She is pursuing her MS degree in Exercise Science at Department of Kinesiology in University of Wisconsin-Madison.

chiayichou@gmail.com

Notes: