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Reduction of blood pressure by electroacupuncture in mild to moderate hypertensive patients: randomized controlled trial

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There is a growing interest in integrative medical treatments such as acupuncture on hypertension although therapy to control high blood pressure (BP) is available. We have demonstrated in a series of experimental investigations the mechanisms and actions of acupuncture and electroacupuncture (EA) in models of elevated BP associated with reflex induced sympathoexcitation. These studies suggest that bilateral EA at select acupoints PC5-6 and ST36-37, in contrast to EA at LI6-7 and GB37-39, inhibits sympathetically-mediated reflex responses lowering BP through cardiovascular regions in the brain and specific neurotransmitter systems. The experimental findings provided guidance in designing the clinical study to proof the overall hypothesis that weekly EA at PC5-6+ST36-37 but not LI6-7+GB37-39 acupoints for 8 weeks decreases BP for a prolonged period of time in patients with mild to moderate hypertension. We have used 24-hr ambulatory blood pressure measurements to monitor EA-inhibition of peak and average systolic and diastolic BP (SBP and DBP) and to identify high and low responders to EA. In a cross-over and double blinded design, we have shown that EA application to acupoints PC5-6+ST36-37 for 8 weeks reduces peak and average SBP by 8 and 6 mmHg in the overall group. Of interest, in high responders EA decreases peak and average SBP by 16 and 11 mmHg. Following 8 weeks of EA treatment, sympathetic activity reduces and therefore ultimately norepinephrine, renin-aldosterone-system. In subgroup of patients, we observed a long-lasting blood pressure lowering acupuncture effect for at least an additional four weeks after the end of EA treatment.

Biography

Stephanie Tjen-A-Looi completed her Ph.D from University of Wisconsin, Madison and is currently Project Scientist in University of California, Irvine. She has published over 47 peer reviewed articles and chapters and is currently serving as an editorial board member for American Journal of Physiology - Heart and Circulation, Evidence-Based Complementary and Alternative Medicine, and BioMed Central (BMC) - Complementary and Alternative Medicine.

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