OMICS International
conferenceseries.com

Xiaochun Yu et al., Altern Integr Med 2015, 4:3
http://dx.doi.org/10.4172/2327-5162.S1.011

3rd International Conference and Exhibition on
Traditional & Alternative Medicine
August 03-05, 2015 Birmingham, UK

Anti-arrhythmic effect of acupuncture pretreatment in the rats subjected to Simulative global ischemia and reperfusion: Involvement of intracellular calcium and Connexin 43

Xiaochun Yu, Junhong Gao, Yuxue Zhao, Juanjuan Xin and **Fengyan Lu**
China Academy of Chinese Medical Sciences, China

Our previous study showed that the cardiac arrhythmias induced by myocardial ischemia and reperfusion were attenuated by the pretreatment of acupuncture. The present study explored further whether intracellular Ca2+ ([Ca2+]i) and connexin 43 (Cx43) are involved in the mediation of the anti-arrhythmic effect of electro-acupuncture (EA) pretreatment in the rats subjected to simulative global ischemia and reperfusion (SGIR). SGIR was made in the isolated heart by a lowflow perfusion followed by restoration of the flow to the control level. Adult rats were randomly divided into four groups, namely, normal control group, SGIR group, EA group and EA plus 18 beta-glycyrrhetinic acid (EAG) group. For EA pretreatment, bilateral Neiguan acupoints (PC6) of the rats were stimulated for 30 min once a day for 3 consecutive days. Cx43 antagonist was given to the rats in EAG group 30 minutes before the pretreatment of EA. The resting [Ca2+]i concentration, calcium oscillation, the contents of total Cx43 and non-phosphorylated Cx43 and arrhythmia score were compared among different groups. The results showed that EA pretreatment could produce anti-arrhythmic effect in the rats subjected to SGIR. The anti-arrhythmic effect of EA pretreatment may be due at least partly to the inhibition of SGIR-induced calcium overload and [Ca2+]i oscillations, reduction of non-phosphorylated Cx43 and the enhancement of the corresponding phosphorylated Cx43 in the cardiac cells.

Biography

Xiaochun Yu, BMed, MMed & PhD is a Professor and Deputy Director of Institute of Acupuncture and Moxibustion, China Academy of Chinese Medical Sciences, Doctoral tutor. His research interest is to explore the mechanism of acupuncture and moxibustion and acupoint specificity as well as joint administration of acupuncture and drugs. So far totally 7 research projects including National Basic Research Programs of China are/were granted by Ministry of Science and Technology of China, National Natural Science Foundation of China and Natural Science Foundation of Beijing (as the Principal Investigator), and more than 90 articles in total were published in SCI and Chinese journals.

yuxc@mail.cintcm.ac.cn

Notes: