Stimulation of gastric slow waves with manual acupuncture at acupuncture points ST36 and PC6--a randomized single blind controlled trial.

To investigate the effects of stimulated and non-stimulated manual acupuncture at ST36 and PC6 on gastric myoelectrical activity and autonomic function. A total of 65 healthy volunteers were randomly assigned to a 1:1:2 ratio to receive either 15 min of verum acupuncture (VA) with stimulation followed by 15 min of VA without stimulation (nsVA), or 15 min of nsVA followed by 15 min of VA with stimulation (sVA), or 30 min of sham acupuncture (SA). Measures of autonomic function included electrogastrogram, electrocardiogram, impedance cardiography and assessment of blood pressure, breathing frequency, and electrodermal activity. Outcome parameters were compared between VA and SA, and between sVA and nsVA. The percentage of regular gastric slow waves (normogastria) was defined as the primary outcome. The percentage of normogastria was not significantly different between VA and SA. Differences in secondary outcomes such as power spectrum of gastric slow waves and heart rate variability parameters were pronounced in the comparison of sVA and nsVA. During sVA, the percentage of normogastria was lower (P = 0.005), the percentage of bradygastria was higher (P = 0.003) and power ratio was higher (P < 0.001), systolic blood pressure was lower (P = 0.039) and RMSSD was higher (P < 0.001) as compared with
Our study suggests that manual stimulation of acupuncture needles at ST36 and PC6 affects gastric myoelectrical as well as cardiac activities in healthy volunteers. The effect of stimulation in acupuncture deserves further investigation.