

Therapeutic effects of acupuncture on abnormal gastric contractile activity investigated by impedance gastrogram

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Abstract

AIM: Our previous studies have demonstrated that impedance gastrography is a reliable non invasive technique for measuring human gastric contractile activity. In the present study, the therapeutic effects of acupuncture on abnormal gastric contractile activity in the patient with dyspepsia was investigated by impedance gastrogram.

METHODS: Altogether 34 cases of gastric dysrhythmias who without normal 3.0 cycle/min impedance gastrogram patterns (> 3.5 and < 2.5 cycle/min) were examined by impedance gastrogram. They were equally divided into 2 groups at random. A group as acupuncture group, B group as control group (sham acupuncture, without needling reaction and the propagated sensation along meridians). Impedance gastrograms before and after first treatment course were recorded respectively. The patients symptoms were scored. Acupuncture points Zusanli (S36). Neiguan (P6). Zhongwan (RM12). Weishu (B21)

were selected. Ten days were defined as a treatment course. The impedance gastrogram signals was channeled to the A/D conversion board in computer where it was digitized at 4 Hz, the digitized signal was filtered to remove high frequency (> 9.0 cpm) and very low frequency (< 1.0 cpm) components. The time series was Fourier transformed. The spectral density estimates were calculated and graphed in a running spectral plot.

RESULTS: In a group there was a statistic significance ($P < 0.05$) between symptom scores (3.8 ± 2.7) after acupuncture treatment and those (15.5 ± 4.7) before acupuncture treatment. After acupuncture treatment, there was a statistic significance ($P < 0.05$) between symptom scores of 2 groups (3.8 ± 2.7) and (13.1 ± 4.4). In A group, improvement of abnormal impedance gastrogram (14 cases before normal) was more apparent between them than that of B group (1 case normal), there was a statistic significance ($P < 0.05$).

CONCLUSION: Our study indicated that acupuncture can decrease the upper gastrointestinal symptom scores and improve abnormal impedance gastrogram. The impedance gastrogram can evaluate acupuncture therapeutic effects objectively.

Key words: Therapeutic; Acupuncture; Impedance gastrogram

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