



Effects of WS-frequency spectrometer on gastric ulcer healing of rats

Zhen-Shu Zhang, Wan-Dai Zhang, Xue-Qing Chen, Xian-Jin Zhou, Dian-Yuan Zhou

Zhen-Shu Zhang, Wan-Dai Zhang, Xue-Qing Chen, Xian-Jin Zhou, Dian-Yuan Zhou, Department of Gastroenterology, Nanfang Hospital The First Military Medical University, Guangzhou, Guangdong Province, China

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Abstract

AIM: Peptic ulcer is a chronic disease seen in clinical practice. Chemical drug therapy remains a main choice in treating the ulcer, but the increasing data showed that the drug therapy was not only costly, but also had some sideeffects. Therefore, searching for economic and effective new therapeutic measures have been an important task. It has been reported that WS-frequency spectrometer is of multiple biological effects in the human body, this study attempts to determine whether this device has any healing effects on gastric ulcer model in Wistar rats.

METHODS: Gastric ulcers were successfully developed in 24 rats by

acetic acid method. The rats were randomly divided into 3 groups. Rats in group A were treated with WS-frequency spectrometer for 30 min, twice daily for 8 consecutive days. Rats in group B were treated with incandescence lamp in the same manner as group A. Rats in group C serves as control. Gastrointestinal propulsion rate was calculated by IRA.

RESULTS: After 16 time of treatment, the mean area of the ulcer in group A was $12.8 \pm 3.8 \text{ mm}^2$ ($P < 0.01$) and in group C ($66.5 \pm 40.9 \text{ mm}^2$) ($P < 0.01$), there was no significant difference between the latter two groups ($P > 0.05$). The concentration of gastrin in plasma in group A was $125 \pm 22 \text{ pg/mL}$, which was significantly higher than in group C ($P < 0.05$), but the gastrointestinal propulsive rate was similar in group A and C.

CONCLUSION: Our findings suggest that WS-frequency spectrometer can promote the ulcer healing, and this effect may be related to the increased gastrin level.

Key words: WS-frequency spectrometer; Ulcer healing; Gastrin

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