

題名:Effects of ginkgo biloba extract on the mucosal healing in rats with duodenal ulcer.

作者:陳盛?

Chao Jane C-J; Hung HC; Chen SH; Fang CL

貢獻者:醫學系內科學科

上傳時間:2009-10-06T04:07:12Z

摘要:AIM: To investigate the effects of Ginkgo biloba extract on cytoprotective factors in rats with duodenal ulcer.

METHODS: Sprague-Dawley rats were randomly divided into four groups: sham operation without ginkgo, sham operation with ginkgo, duodenal ulcer without ginkgo, and duodenal ulcer with ginkgo. Rats with duodenal ulcer were induced by 500 mL/L acetic acid. Rats with ginkgo were intravenously injected with Ginkgo biloba extract from the tail at a dose of 0.5 mg/(kg/d) for 7 and 14 days. RESULTS: Pathological result showed that duodenal ulcer rats with ginkgo improved mucosal healing and inflammation compared with those without ginkgo after 7 d treatment. After 14 d treatment, duodenal ulcer rats with ginkgo significantly increased weight gain ( $34.0 \pm 4.5$  g versus  $24.5 \pm 9.5$  g,  $P < 0.05$ ) compared with those without ginkgo. Duodenal ulcer rats significantly increased cell proliferation ( $27.4 \pm 4.0$  and  $27.8 \pm 2.3$  BrdU-labeled cells in duodenal ulcer rats with and without ginkgo versus  $22.4 \pm 3.5$  and  $20.8 \pm 0.5$  BrdU-labeled cells in sham operation rats with and without ginkgo,  $P < 0.05$ ) compared with sham operation rats. Mucosal prostaglandin E<sub>2</sub> concentration significantly increased by 129% ( $P < 0.05$ ) in duodenal ulcer rats with ginkgo compared with that in those without ginkgo. Duodenal ulcer rats without ginkgo significantly decreased superoxide dismutase activity in the duodenal mucosa and erythrocytes ( $19.4 \pm 6.7$  U/mg protein versus  $38.1 \pm 18.9$  U/mg protein in the duodenal mucosa, and  $4.87 \pm 1.49$  U/mg protein versus  $7.78 \pm 2.16$  U/mg protein in erythrocytes,  $P < 0.05$ ) compared with sham operation

rats without ginkgo. However, duodenal ulcer rats with ginkgo significantly increased erythrocyte superoxide dismutase activity ( $8.22 \pm 1.92$  U/mg protein versus  $4.87 \pm 1.49$  U/mg protein,  $P < 0.05$ ) compared with those without ginkgo. Duodenal ulcer rats without ginkgo significantly increased plasma lipid peroxides ( $4.18 \pm 1.12$  micromol/mL versus  $1.60 \pm 1.10$  micromol/mL and  $1.80 \pm 0.73$  micromol/mL,  $P < 0.05$ ) compared with sham operation rats without ginkgo and duodenal ulcer rats with ginkgo during the experimental period. CONCLUSION: Ginkgo biloba extract can improve weight gain and mucosal healing in duodenal ulcer rats by the actions of cytoprotection and antioxidation.