

## Healing Effect of Alginate Liquid against HCl-Induced Gastric Mucosal Lesions in Rats

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**Abstract: Background:** Hyperacidity of stomach is a common global problem. The pathophysiology of this disorder focuses on the imbalance between destructive and protective factors of gastric mucosa.

**Purpose:** The purpose of this study was to determine the healing effect of gastric mucosal lesions of alginate liquid compared to sucralfate suspension against HCl-induced in rats.

**Methods:** Sixty Wistar rats weight 150-200 g were adapted under standard environmental conditions for 2 weeks before used. Rats were fasted for 36 hours before the test, then the rats were orally induced by 1 ml of 1 M HCl. Six animals were killed after 1 hour to confirm the gastric mucosal lesions by macroscopic (number of lesions and lesion index) and microscopic (histopathology) observation. The remaining, 54 rats were divided equally in three groups and each group was divided in three subgroups according to time schedule of treatment (3, 7, and 10 days). First group without treatment (negative control), received 1 ml distilled water only once a day. Second group (standard treatment group), received 1 ml sucralfate suspension once a day. Third group (test treatment group), received 1 ml alginate liquid once a day.

**Results:** On macroscopic examination, the third group of rats (given alginate liquid) had no gastric lesion and the lesion index was zero compared to second group (received sucralfate suspension) which the number of gastric lesions was 1.67 and ulcer index was 0.01 after 7 days treatment. Microscopic examination, the third group showed the intact mucosa compared to second group after 7 days treatment.

**Conclusion:** The experimental results indicates that alginate liquid is faster in healing of gastric mucosal lesions than with sucralfate suspension.

**Keywords:** Gastric lesions, healing, alginate liquid, sucralfate suspension.