

ABSTRACT

Effect Of Antidepressant Fluvoxamine on Bax And Bcl-2 mRNA Expression of Mice Gastric With Gastric Ulcer In Stress Induced

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Stress-induced gastric ulcer usually mark with localized lesion of gastric mucosa, this caused by necrotic mucosa, and appears as erosion. Previous report showed that administration SSRI before stress has gastro-protective. Fluvoxamine is able to improve the condition of the gastric mucosal epithelium. This drug inhibit apoptosis in stress with increasing the expression of HSP70 protein. The aim of this research was to investigate the effect of antidepressant fluvoxamine which given before stress on healing gastric mucosa's mRNA expression of *bax* and *bcl-2*. *Bax* and *bcl-2* proteins are marker of apoptosis. Mice were divided into four groups. Twenty four hours before stress induction, mice were fasted from food. To induce stress, mice were restrained in 50 ml syringe for 6 hours and immers in water for 6 hours. Fluvoxamine 50 mg/kg and 100mg/kg were orally administered 30 minutes before stress.

The results showed that there is an ulcer on the stress-induced group vs. control group ($p < 0.0001$). On the giving of fluvoxamine 50 mg/kg reduced ulcer area significantly ($p < 0.005$) and fluvoxamine 100 mg/kg reduced ulcer area significantly ($p < 0.0001$). In addition, administration of 50 mg/Kg and 100 mg/Kg fluvoxamine decreased the mRNA expression of *bax* and increased the mRNA expression of *bcl-2*. Furthermore ratio of *bax/bcl-2* also rised in fluvoxamine 50 mg/Kg and 100 mg/Kg. This suggests that fluvoxamine is able to improve gastric mucosal epithelium condition by inhibiting apoptosis cell in stress-induced gastric ulcer.

Keywords: gastric ulcer, stres, fluvoxamine, *bax*, *bcl-2*