

ABSTRACT

Introduction: Long-term uses in high-dose therapy of aspirin causes gastric mucosal damage. Herbs which known has flavonoid compounds as gastroprotective is *Ocimum sanctum* L..

Objectives: This study aimed to determine the effect of extracts of *Ocimum sanctum* L. on the degree of mice (*Mus musculus*) gastric mucosal damage induced by aspirin.

Material and methods: This experimental research used post-test only control group design. Thirty male mice average weight 20-30 grams were divided into 5 groups. Four groups (KP, P1, P2 and P3) were induced by aspirin 56 mg/kgBW for 7 days. One group (N) was administered with CMC Na 0,5% for 14 days. Group P1, P2, and P3 was administered with extract of *Ocimum sanctum* L. dosage 28, 42, and 56 mg/kgBW on day 8-14. All treatments were given per oral, once a day. The whole group was terminated on day 15, except KP which terminated on the 8th day. Gastric fundus was taken for Hematoxylin eosin staining (HE) and observed under a microscope, magnification of 400x in 5 visual fields to assess the degree of gastric mucosal damage by Esplugues & Whittle scoring system. Statistical analysis was done with Kruskal-Wallis and Mann-Whitney test. P value of <0.05 was considered statistically significant.

Results: There was significant differences between the positive control group and treatment group 1 ($p= 0.011$). Positive control group shown 0% normal mucosa and dominated with third-degree damage while the treatment group 1 shown 20% normal mucosa and dominated with second-degree damage.

Conclusion: It was only 28 mg/kgBW extract of *Ocimum sanctum* L. group which shown significant gastroprotective effect of gastric mucosal damage compared with positive control group.

Keyword: gastric mucosal damage, *Ocimum sanctum*, aspirin, gastroprotective, anti-ulcer