

## **ANTI ULCER ACTIVITY OF RANITIDINE- AN IN VITRO STUDY**

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The present work focuses on developing in-vitro method to study the anti ulcer activity using isolated goat small intestine which is easily available from slaughterhouse without going for any hindrances and avoided intentional sacrificing laboratory animals. Usually the ulcerogenic effect is studied in fasted rats. Following treatment with ulcerogenic agent like hydrochloric acid, aspirin or ethanol, the animals are sacrificed after predetermined period. The stomach or small intestine are then removed and inspected for lesion and ulcer. Even for a minor investigation on anti ulcer drug or herbal extracts, the rats are sacrificed. The paper presents an alternative in vitro technique which was developed to study anti ulcer activity using isolated goat small intestine.

During the testing period, it was observed that the ethanol induced ulcers were prominent and distinguishable in the control group as compared to ranitidine treated intestinal segments where ulceration was appreciably inhibited. On visual inspection it was observed that the margins of intestinal segments in control group were eroded. The number of ulcers in control group was  $13 \pm 0.5$  and in case of treated group it was  $3 \pm 0.4$ . The ulcer area was also studied. In case of control group the ulcer area was measured to be  $35\text{mm} \pm 0.35$  while in treated group it was  $10\text{mm} \pm 0.4$ . It was found that ranitidine produced 76.9% and 71.4% protection in ulcer spots and ulcer area respectively. To minimize the stress and pain in rats and avoiding their sacrifice, this investigated approach can be advocated for use in further advance research studies.

### **INTRODUCTION**

An animal experimental study forms an integral part of drug development and research. it is infact the back bone of modern medicine. In India. the experimentation on animal in course of medical research and education is covered by the provision of the Prevention of Cruelty to Animal Act,1960 and the Rules under the act of 1998 and 2001. This is enforced by the Committee for Purpose of Control and Supervision of Experiments on Animals (CPCSEA), a statutory body under the Prevention of Cruelty to Animal Act 1960. Under these provisions. the concerned establishment and institution are required to seek approval and clearance from CPCSEA to conduct animal studies .The basic objective of

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