

PHARMACOLOGICAL SCREENING OF ANTI-ULCER POTENTIAL OF
HYDROALCOHOLIC LEAVES EXTRACT (HLE) OF *MORUS ALBA* IN ALBINO RATS*¹Sanjay Kumar and ²Shalini Singh¹Research Scholar, Institute of Pharmaceutical Sciences and Research, Unnao (UP) IN.²Assistant Professor, Institute of Pharmaceutical Sciences and Research, Unnao (UP) IN.

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ABSTRACT

Peptic ulcer is acid-induced injury of intestinal system that is generally situated in stomach or upper segment of duodenum. It has been characterized by bared mucosa with imperfection stretching out into sub-mucosa. Few previous literatures indicates that anti-ulcer effect of *Morus alba* has been evaluated using extractions obtained using alcohol solvent. So, this research focuses on pharmacological screening of anti-ulcer potential of hydroalcoholic leaves extract of *M. alba* in albino rats. The extraction of the same was done by maceration process using hydroalcoholic solution (1:1) for better and optimum release of chemical constituents. Pylorus-ligation, cold restraints and forced swimming models were used to determine the anti-ulcerogenic activity. Various parameters were evaluated such as pH determination, volume of gastric content, free acidity, total acidity and various microscopical studies. In the models, *M. alba* leaf extract (hydroalcoholic) showed a significant anti-ulcer effect when compared to control group and for standard group (Ranitidine 20mg/kg). The effect as anti-ulcerogenic was seen in the dose dependent manner. In conclusion, hydroalcoholic leaves extract (HLE) of *Morus alba* is effective as anti-ulcer at both the doses. But effect was optimum in the dose of 400mg/kg than 200mg/kg. It suggests, to identify and isolate the responsible moiety for this anti-ulcer activity and to convert into suitable dosage form.

KEYWORDS: Hydroalcoholic, HLE, anti-ulcer, *Morus alba*, forced swimming induced-ulcer, pylorus-ligation.

INTRODUCTION

Peptic ulcer is acid-induced injury of intestinal system that is generally situated in stomach or upper segment of duodenum. It has been characterized by bared mucosa with imperfection stretching out into sub-mucosa (Zhang et al. 2014). Gastric ulcer is 4 times as prevalent as intestinal ulcer. In fact, men are more prone than women to suffer from duodenal ulcer. Individual susceptibility is crucial in the early phases of mucosal injury because only a small percentage of patients infected with *H. pylori* or by using NSAIDs develop peptic ulcers. Peptic ulcers are linked to functional poly-morphisms in various cytokine genes (Datta & Roychoudhury, 2015). Some common and alarming symptoms of PUD includes as epigastric pain, bloating, Abdominal load, nausea & emesis, weight loss/gain, hematemesis, melena, frequent, requent weight loss, dysphagia- progressive, over g.i.t. blood loss, Iron deficient anemia and cancer in ancestors.

The stomach and upper duodenum are the most often affected areas. Affected areas include the lower oesophagus, distal duodenum, and jejunum. In patients with a stomach ulcer, epigastric pain usually occurs 15-

30 min after meal; however, discomfort in patients with a duodenal ulcer usually arrives 2-3 hours after a meal (Malik et al. 2021). NSAID users, on the other hand, have a four-fold greater risk of peptic ulcer complications, whereas aspirin users have twice the risk. The use of anticoagulants, corticosteroids, and SSRIs with NSAIDs or aspirin increases the risk of upper gastrointestinal hemorrhage (Kuna et al. 2019).

These are come common and rare factors behind the development of ulcer-

- Infection through *H. Pylori*
- NSAIDs induced ulcer
- Other medications
- Zollinger-Ellison illness
- Stomach Cancer
- Cancer of lungs
- Lymphomas
- Acute ailments
- Burns
- Head injuries
- Viral infections
- Circulatory insufficiency
- Radiation cure