







Q



## Journal of Dietary Supplements >

Volume 15, 2018 - <u>Issue 4</u>

139 27
Views CrossRef citations to date Altmetric
Article

# Gastroprotective and Antiulcer Effects of *Celastrus paniculatus* Seed Oil Against Several Gastric Ulcer Models in Rats

Suresh Palle ✓, PhD, A. Kanakalatha, MPharm & Ch. N. Kavitha, MPharm, PhD

Pages 373-385 | Published online: 17 Aug 2017





Full Article

Figures & data

References

**66** Citations

**Metrics** 

Reprints & Permissions

Read this article



## **ABSTRACT**

Peptic ulcer is a recurrent chronic illness and has become almost a hallmark of the so-called civilized life. In folk medicine, the Celastrus paniculatus plant has been used for the prevention and treatment of various diseases and gastrointestinal disturbances, including dyspepsia and stomach ulcers. The aim of this study is to evaluate the gastroprotective and antiulcer effects of Celastrus paniculatus seed oil (CPO) against several gastric ulcer models in rats. The gastroprotective and antiulcer effects of CPO were evaluated using pylorus-ligated ulcer ethanol- and indomethacin-induced ulcers using rantidine (40 mg/kg per os [PO]) as standard. Gastrointestinal motility was determined by gastric emptying time and gastrointestinal transit ratio. The results of the pharmacological studies of CPO (200 mg/kg, 400 mg/kg) demonstrated effective gastroprotection against ethanol- and indomethacin-induced ulcer models. In pylorus-ligated rats, the seed oil showed gastroprotective activity by decreasing total gastric

juice volume and gastric acidity while increasing the gastric pH. The gastroprotection against ethanol and indomethacin is partially attributed to effective inhibition of proinflammatory cytokines, TNF- $\alpha$  and IL-6, and increase in the levels of IL-10. Treatment with CPO in ethanol-induced ulcer rats significantly (p < .05) decreased MDA (malondialdehyde) levels, which were accompanied by an increase in the activities of SOD (superoxide dismutase) and catalase. CPO reduced the rate of gastric emptying but had no effect on gastrointestinal transit. The present findings indicate that CPO has potent gastroprotective effects and support the folkloric usage of the seed oil to treat various gastrointestinal disturbances.

#### **KEYWORDS:**

Celastrus paniculatus seed oil gastric emptying gastro protection peptic ulcer ulcer index

## Declaration of interest

The authors declare no conflicts of interest. The authors alone are responsible for the content and writing of the article.

# Additional information

## Notes on contributors

Suresh Palle

Suresh Palle, MPharm, PhD, Department of Pharmacology, Vaagdevi Institute of Pharmaceutical Sciences, Bollikunta, Warangal, Telangana, India.

## A. Kanakalatha

A. Kanakalatha, MPharm, Department of Pharmacology, St Peters Institute of Pharmaceutical Sciences, Vidyanagar, Warangal, Telangana, India.

#### Ch. N. Kavitha

Ch. N. Kavitha, MPharm, PhD, Department of Pharmacology, Nirmala Institute of Pharmaceutical Sciences, Vijayawada, India.

# Related research 1



People also read

Recommended articles

Cited by 27

Information for

**Authors** 

**R&D** professionals

**Editors** 

Librarians

**Societies** 

Opportunities

Reprints and e-prints

Advertising solutions

Accelerated publication

Corporate access solutions

Open access

Overview

Open journals

**Open Select** 

**Dove Medical Press** 

F1000Research

Help and information

Help and contact

Newsroom

All journals

Books

### Keep up to date

Register to receive personalised research and resources by email















Accessibility



Copyright © 2025 Informa UK Limited Privacy policy Cookies Terms & conditions



Registered in England & Wales No. 01072954 5 Howick Place | London | SW1P 1WG