



Anti-inflammatory Effect of Folk Remedy for Hemorrhoids Treatment

Kanyarat Peng-ngummuang^{1*}, Piyaporn Thorajake¹, Jaknarin Dokmaiphet¹, Charanya Thongsing¹, Phanida Kamuttachai¹, Jintana Junlatat^{1#}

¹Faculty of Thai Traditional and Alternative Medicine, Ubon Ratchathani Rajabhat University, Ubon Ratchathani 34000, THAILAND

Received June 2nd, 2022

Accepted June 20th, 2022

Published July 20th, 2022

*Conference presenter:

Kanyarat Peng-ngummuang,

Corresponding author:

Jintana Junlatat, Faculty of Thai Traditional and Alternative Medicine, Ubon Ratchathani Rajabhat University Ubon Ratchathani province, Thailand, 34000

E-mail:

kanyarat.p@ubru.ac.th

(Kanyarat Peng-ngummuang)

piyaporn.t@ubru.ac.th

(Piyaporn Thorajake)

std.61125210101@ubru.ac.th

(Jaknarin Dokmaiphet)

std.61125210111@ubru.ac.th

(Charanya Thongsing)

phanida.k@ubru.ac.th

(Phanida Kamuttachai)

jintana.j@ubru.ac.th

(Jintana Junlatat)

© 2022, Peng-ngummuang, K. et al.

This is an Open Access article published under a Creative Commons (CC BY-NC-ND 0.4) license.



ABSTRACT

Introduction: Mr. Kittu Nakun, a well-known folk healer in Ubon Ratchathani province. Nowadays, hemorrhoids are one of the many diseases that he treats patients with herbal medicine. The hemorrhoids treatment remedy of Mr. Kittu Nakun consisted of 4 herbs including *Salacia chinensis* L., *Salacia verrucosa* Wight., *Curcuma comosa* Roxb., and *Cissus quadrangularis* L.

Objective: The objective of this research was to study the anti-inflammatory activity of extract from a hemorrhoid treatment remedy of Mr. Kittu Nakun.

Methods: The remedy was extracted with water and freeze-dried. Then, the extract was tested for cytotoxicity on macrophages (RAW264.7 cells). The anti-inflammatory effect was examined via the nitric oxide production by using Griess reagent and the inflammatory-related genes by using semi-quantitative reverse transcription and polymerase chain reaction technique in lipopolysaccharide-induced cells.

Results: The results showed that the extract had a low cytotoxicity with the cell growth inhibitory concentration (IC₅₀) greater than 1000 µg/mL. Moreover, the anti-inflammatory activity test with Griess reagent demonstrated that the extract at a concentration of 200 µg/mL was able to inhibit nitric oxide secretion by 46.38%. In addition, the extract at concentration of 50-200 µg/mL were able to inhibit cyclooxygenase-2 and tumor necrosis factor-α gene expression in a dose dependent manner.

Conclusion: The information of this study is very important and useful in promoting the wisdom of folk healers to be recognized and further developed.

Keywords: folk remedy, anti-inflammation, hemorrhoids, herbal medicine