

ABSTRACT

THE INFLUENCE EFFECT KIDNEY HISTOPATHOLOGY of MANGOSTEEN RIND (*Garcinia mangostana L.*) 40% ETHANOL EXTRACT on RIFAMPICIN in MALE RAT.

By

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Rifampicin is one of the tuberculosis drug which induces kidney damage, such as acute renal impairment, acute tubular necrosis, acute tubulointerstitial nephritis, and chronic kidney disease. The skin of the mangosteen has pharmacological activities such as anti-inflammatory, antihistamine and for treatment of heart disease, antibacterial, and antifungal. Xanton compounds in mangosteen rind influence kidney damages due to the use of rifampicin. The purpose of this study to determine the effect of 40% ethanol extract of mangosteen rind (*Garcinia mangostana L.*) on the description of the white rat renal histopathology which induced rifampicin.

In this study, 25 male rats are divided randomly into 5 groups and treated for 14 days. K1 is given aquadest, K2 is given rifampicin 100 mg/100gBB), K3 is given 20 mg/100gBB mangosteen rind extract and rifampicin 100 mg/100gBB, K4 is given 40 mg/100gBB mangosteen rind extract and rifampicin 100 mg/100gBB, and K5 is given 80 mg/100gBB mangosteen rind extract and rifampicin 100 mg/100gBB.

The results showed that the average number of necrotic cells in the renal tubules K1: 2.50 ± 2.50 ; K2: 92.5 ± 1.76 ; K3: 66.5 ± 3.79 ; K4: 39 ± 3.35 , and K5: 8 ± 2.09 . In the one way ANOVA test has been found a significant difference ($P=0.000$). Improvement evident in group 5. The conclusion of this study is that the 40% ethanol extract of mangosteen rind doses of 20 mg/100gBB, 40 mg/100gBB, and 80 mg/100gBB effect on renal histopathologic picture of rifampin induced rat.

Key words: Kidney histopathology, rifampicin, *garcinia mangostana L.*, dose-rise.