

## ABSTRACT

### **THE EFFECT OF ADDING RIFAMPICIN AND DEXAMETHASONE ON FUNCTION AND STRUCTURE ABNORMALITIES OF RAT'S KIDNEY**

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Rifampicin was frequently used in tuberculosis patient. In certain, a tuberculosis patient with meningitis tuberculosis usually received dexamethasone as adjunctive therapy due to decrease mortality and morbidity. However there was possible interaction between rifampicin and dexamethasone because the effect can damage of renal. The study aimed to assess the effect of dexamethasone on the rifampicin therapy using healthy rat model.

Rats divided into four groups, with five rats in each group. First group as negative control was received CMC-Na 1%, second group was received rifampicin 54 mg/kg BB, third group was received dexamethasone 1,1 mg/kg BB, and fourth group were received rifampicin 54 mg/kg BB and dexamethasone 1,1 mg/kg BB. Each animal received drug administration for 28 days. The result showed that mean creatine urine concentration of negative control, rifampicin, dexamethasone and combination of rifampicin and dexamethasone group did not show any significant difference. All groups showed creatinine urine level were still within normal level. In contrast, there were significant difference in renal histopathology score, especially on rifampicin and dexamethasone groups. Which demonstrated tissue damage in medulla and cortex area of kidney. In addition, combination rifampicin and dexamethasone also improved the kidney damage.

Keyword: Rifampicin, dexamethasone, tuberculosis, drug interaction