

ABSTRACT

COMPARISON OF GENERIC AMOXICILLIN AND BRANDED AMOXICILLIN MAXIMUM DOSE ADMINISTRATION TOWARD KIDNEY GLUTATHIONE LEVEL OF SPRAGUE DAWLEY RATS

By:

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Increasing amoxicillin use can inflict health problems in Indonesia. Amoxicillin is a beta-lactam broad-spectrum antibiotics and it is used extensively between society. Amoxicillin is metabolized in the liver and excreted through the kidneys. The purpose of this study is to know the difference of the effect of maximum dose generic and branded amoxicillin administration toward kidney glutathione level.

This is an experimental study with post test only control group design. The study used Sprague Dawley rats (*Rattus norvegicus*). Rats was given generic amoxicillin and branded amoxicillin with dose of 102,8 mg/kgbw, 205,6 mg/kgbw and 411,2 mg/kgbw. Kidney glutathione levels was measured using the Ellman method. Reagent dithionitrobenzoic acid was used and the absorbancy was measured using spectrofotometry. Standard curve was acquired from linear regression of standard solution. Standard curve equation used in this study is $y=250,9x-2.3241$. Kidney glutathione levels was calculated by inputting the absorbancy to the equation. Then one way ANOVA statistical test was performed to know the correlation between amoxicillin dose and GSH levels.

Based on this study, there is a difference of the effect of maximum dose generic and branded amoxicillin administration toward kidney glutathione level in dose 102,8 mg/kgbw and 205,6 mg/kgbw and there is a decrease to kidney glutathione levels of rats administered with generic amoxicillin as well as branded amoxicillin

Key words: Amoxicillin, glutathione, xenobiotics