ABSTRACT

COMPARISON OF TOXIC DOSE ADMINISTRATION OF GENERIC AMOXICILLIN AND BRANDED AMOXICILLIN TOWARDS LIVER MALONDIALDEHYDE (MDA) LEVEL OF *Rattus norvegicus* STRAIN *Sprague Dawley*

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Amoxicillin has electronegative side chain and betalactam ring that attack thiol group and produce Reactive Oxygen Species (ROS) that induce lipid peroxidation with malondialdehyde (MDA) as its final product. The purpose of this study is to compare rat liver's malondialdehyde level on toxic dose administration of generic and branded amoxicillin.

This study uses 28 male rats divided into 1 control group and 6 experimental groups. Control group is induced with aquadest. Experimental groups are consist of generic groups (A) and branded groups (B), induced with three different dose of amoxicillin, which is 205,6 mg/kg; 411,2 mg/kg; and 822,4 mg/kg. Drugs are given 1 cc three times per day for 14 days. Rats are terminated using euthanasia procedure and cervical dislocation. Rat livers are processed into homogenates and MDA level is determined using Wills method. Data are analyzed using One Way ANOVA Test and Post-Hoc LSD.

Results are found to be significant in comparison between A3 and B3 (p=0,000). Results are insignificant in comparison between A1 and B1 (p=0,700) and A2 and B2 (p=0,831). There is a difference of rat liver's MDA level between toxic dose administration of generic amoxicillin and branded amoxicillin.

Keywords : amoxicillin, malondialdehyde, *reactive oxygen species*