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Oral Communication Abstract
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Correlation of Systolic Blood Pressure and Vascular Damage Status After Intervention of Synbiotic Drink of Stelechocarpus burahol with Lactobacillus casei and Lactobacillus plantarum Isolates: A Dyslipidemic Rats Model Study

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Objectives: Dyslipidemia may promote hypertension and oxidative stress-induced vascular damage. Malondialdehyde (MDA) level is commonly known as a marker of oxidative stress. Recently, many studies revealed that synbiotic had a potency as an anti-dyslipidemic agent. This study will focus on the measurement of systolic blood pressure and MDA level in aortic hyperlipidemic rats after the intervention of synbiotic drink of *Stelechocarpus burahol* with *Lactobacillus casei* and *Lactobacillus plantarum* isolates.

Methods: Randomized controlled group was conducted on twenty-five rats divided into five groups. After a week acclimatization the negative control group (K-) and interfered group (P1, P2, P3) were fed by high-fat diet (20 grams/day) for four weeks, while the normal group were given standard diet (20 grams/day). Lipid profile measurement was conducted on the rats to ensure that the rats (negative control group, P1, P2, and P3) became dyslipidemia. Then, synbiotic drink were given to interfered group at various dosage (P1=1.2; P2=1.8; P3=2.4) ml/day for four weeks. Systolic blood pressure were measured before and after intervention of synbiotic drink. At the end of study, the rats were terminated and MDA level measurement was conducted on aortic tissues.

Results: The mean of systolic blood pressure (mmHg) were 105.40 ± 14.39 (normal group), 107.40 ± 21.43 (K-), 97.40 ± 11.71(P1), 90.00 ± 9.77(P2), 90.80 ± 17.25(P3) (p-value =0.285). Then, the aortic MDA level (nmol/gram) were 3.55±0.25 (normal group); 11.01±0.41 (K-); 6.57±0.16 (P1); 5.03±0.29 (P2); 4.28±0.29 (P3) (p-value= 0.000). Bivariate Pearson correlation coefficient showed positive correlation between systolic blood pressure and vascular MDA level (r=0.223, p-value = 0,284)

Conclusions: This study suggests that there were positive correlation between systolic blood pressure and vascular damage status with no significant linear relationship. The synbiotic drink may inhibit vascular demage and improve systolic blood presure.

Figure 1. Graphic of Systolic Blood Pressure Before and After Intervention of Synbiotic Drink

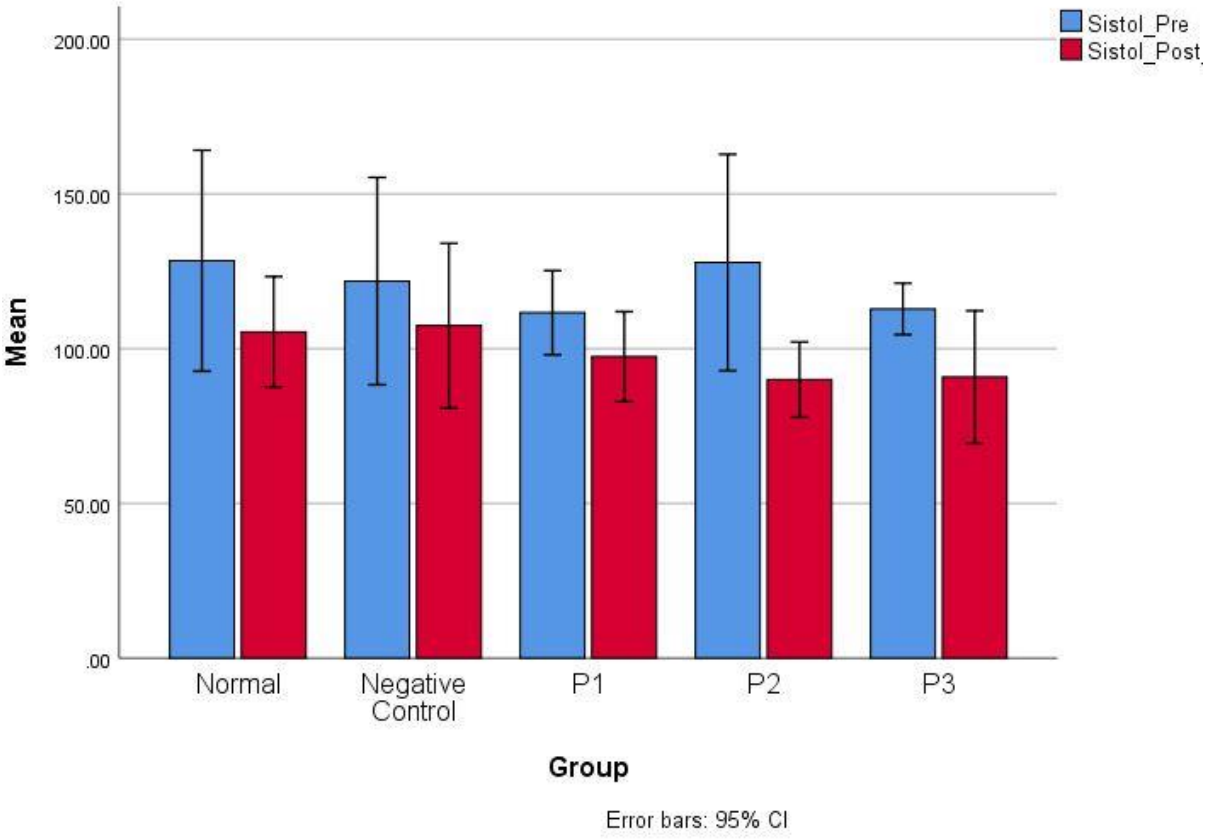

Figure 2. Graphic of Vascular (Aorta) MDA Level