

**Kata kunci:** mentega putih, aorta abdominalis, ketebalan, aterosklerosis.

***THE EFFECT OF GRADED DOSES OF SHORTENING ON  
AORTIC ABDOMINAL THICKNESS IN MALE WISTAR RATS  
(Rattus norvegicus)***

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***ABSTRACT***

**Background :** Cardiovascular disease (CVD) is a degenerative disease that causes death. One of the risk factors for CVD is hypercholesterolemia. Life style, minimum physical activity and unhealthy foods are the risk factors of hypercholesterolemia. Shortening is usually found in bread or other foods. Rats induced by shortening because of economic and accessibility factors. Male Wistar rats induced by shortening 1:5 (4 g shortening in 20 g standard food) show high cholesterol blood levels. Recent study shows correlation between atherosclerosis and cholesterol blood levels and measured by aortic abdominal thickening.

**Objective :** Knowing the influence of shortening to aortic abdominal thickening.

**Method :** This study is experimental with post test only control group, observation of 24 biological materials stored preparations are already organized in previous research. K(-)=Control group, K(+)=received standard high fat diet group, P1 received shortening liquid and standard feed with a ratio of 1: 5, and the treatment group 2 and P2 received shortening liquid and standard feed with a ratio of 1:10. Preparations staining using hematoxylin-eosin. Thickening of aortic abdominalis was captured by optilab and measured by microscope ruler in  $\mu\text{m}$ .

**Result :** The results of data analysis using One Way ANOVA there are no significant difference between the thickening of aortic abdominalis of rats induced by several doses of shortening. (significant :  $p < 0,005$ ) with the highest to the lowest average consecutively P1 ( $838,90 \pm 75,86 \mu\text{m}$ ), P2 ( $749,88 \pm 99,37 \mu\text{m}$ ), K- ( $741,98 \pm 60,67 \mu\text{m}$ ) and K+ ( $714,29 \pm 90,59 \mu\text{m}$ ).

**Conclusion :** There are no significant difference between the thickening of aortic abdominalis of rats induced by several doses of shortening.

**Keywords :** shortening, aortic abdominalis, thickening, atherosclerosis.