THE EFFECTS OF ADMINISTERING OF SUGARCANE ETHANOL EXTRACT ON THE NUMBER OF PURKINJE NEURONS IN THE RAT CEREBELLUM (*Rattus norvegicus*) WITH BCCAO

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ABSTRACT

Background : Stroke is a cerebral circulation disease that causes cerebral functional disorders, moreover stroke is the main cause of death and neurological disability in Indonesia. The sugarcane plants are considered as valuable medicinal herbs that cure various disease as paralyzed from a stroke. Besides, the sugarcane plant contains policosanol that has been proven to decrease cholesterol, *low-density lipoprotein* (LDL) level, and to increase *high-density lipoprotein* (HDL) on humans and animals. Several research studies show that policosanol inhibits the animals develop atherosclerosis lesion.
Objective : This study aims to investigate the effects of administering of sugarcane ethanol extract on the number of purkinje neurons in the rat cerebellum (*Rattus norvegicus*) with BCCAO.
Methods : This research is quasi experimental using post test control group design. The number of subjects in this study were 15 biological blocks which is divided into three groups there are negative control groups, treatment group, and sham operated group. Moreover this research is using ANOVA test for data analysis. Duncan test showed that there is significant difference of three groups are negative control groups there are negative control group, treatment group, and sham operated group.
Result : The result of data analysis using ANOVA test showed that there is significant difference of three groups which means negtative control group (mean : 085), treatment group (mean : 2,67), and sham operated group (mean : 5, 13).
Conclucsion: (1) There is the effects of administering of sugarcane ethanol extract on the number of purkinje neurons in the rat cerebellum (*Rattus norvegicus*) with bilateral common carotid artery ligation, and (2) Sham operated group have the most common numbers of purkinje neurons in the rat cerebellum (*Rattus norvegicus*) when compared to negative control group and treatment group.

Key words : Sugarcane, Cerebellum Neurons, BCCAO