ABSTRACT

The Effect of Black Sugarcane (Saccharum oficinarum) Decoction in Neuron Pyramidal of Prefrontal Cortex of Rat (Rattus novergicus) after Bilateral Carotid Common Artery Oclution (BCCAO)

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Background
Based on Basic Health Research (RISKEDAS, 2013), the highest prevalence of stroke in Indonesia was North Sulawesi (10.8%). The second rank of stroke prevalence in Indonesia was Yogyakarta (10.3%). Yogyakarta people believe that sugarcane can prevent many diseases, including stroke. Usually they drink the decoction of sugarcane to make their body healthier. Evidently, sugarcane contains main compound, policosanol and antioxidant, which reduce ischemic area in the brain. Black sugarcane contains more policosanol than other variant. This research aimed for knowing more evidence of Decoction of Black Sugarcane (DBS) to prevent ischemic area in rat brain. The last research just viewed the effect of policosanol on free oxidant in stroke rat model. In this research, we see the total ammount of neuron pyramidal in prefrontal cortex area in each after treating with blacksugarcane decoction.

Method
16 male rat (*Rattus novergicus*) were used. Rat were divided into three groups: DBS treated stroke model (group 1), Non-treated stroke model brains (group 2), and sham operated (group 3). Brain ischemia was produced by 20 minutes bilateral carotid common artery oclution (BCCAO). Sounding of DBS was one week before BCCAO. Decapitation of mice performed two hours post BCCAO. Brain tissue was stained with toluidin blue. The neuron pyramidal analyzed using Image J software. Statistical analysis was conducted by using Kruskal Walis test.

Result
There are significant effect of DBS of prevention effect ischemic stroke after BCCAO (p=0.024)

Conclusion
Decoction of Black Sugarcane (DBS) has neuroprotection effect in neuron pyramidal of prefrontalis cortex in the rat..

Key words: Ischemic Stroke, Black Sugarcane, Policosanol.