PENGARUH EKSTRAK ETHANOL TEBU HITAM (*Saccharum officinarum* L.) TERHADAP JUMLAH NEURON PIRAMIDAL CORTEKS PREFRONTALIS OTAK TIKUS (*Rattus norvegicus*) PASCA TRANSIENT BILLATERAL COMMON CAROTIS ARTERY OCCLUSION(BCCAO)

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INTISARI

Latar Belakang : Stroke merupakan penyebab utama kematian dan kecacatan utama di dunia yang membutuhkan pengobatan dan perawatan dalam waktu yang lama. Terdapat sekitar 50-70% dari penderita stroke dapat beraktivitas normal kembali, sedangkan 15-30% pasien mengalami cacat permanen berupa kelumpuhan, gangguan sensorik, gangguan berbahasa, gangguan berpikir, gangguan memori dan gangguan emosi. Kecacatan pasca stroke menyebabkan penderita tidak dapat bekerja. Diketahui bahwa corteks prefrontalis merupakan daerah paling rentan terhadap iskemik karena corteks prefrontalis memiliki fungsi Sebagai neuropsikatri dan fungsi motorik.

Tujuan Penelitian : Mengetahui pengaruh ekstrak ethanol tebu hitam (*Saccharum officinarum L.*) terhadap jumlah neuron piramidal corteks prefrontalis otak tikus (*Rattus norvegicus*) pasca transient Billateral Common Carotis Artery Occlusion (BCCAO).

Metode Penelitian : Penelitian ini merupakan penelitian eksperimental dengan menggunakan subjek penelitian tikus (*Rattus norvegicus*) berjumlah 15 ekor tikus. Subjek dibagi menjadi 3 kelompok yaitu Kelompok Stroke, Kelompok Sham dan Kelompok Perlakuan . Data penelitian dianalisis dengan menggunakan uji statistik *One Way ANOVA.*

Hasil : Terdapat perbedaan pada jumlah neuron pyramidal corteks prefrontalis otak tikus yang disignifikan (P< 0,05) antara kelompok stroke, kelompok sham dan kelompok perlakuan.

Simpulan : Pemberian ekstrak ethanol tebu hitam dapat menghambat penurunan jumlah neuron corteks prefrontalis otak tikus pasca transient BCCAO

Kata Kunci : Tebu hitam, iskemia otak, oklusi arteri karotis komunis bilateral, tikus

THE EFFECT OF BLACK SUGARCANE (*Saccharum officinarum* L.) ETHANOL EXTRACT ON THE NUMBER OF PYRAMIDAL NEURONS OF RAT (*Rattus norvegicus*) BRAIN PREFRONTAL CORTEX AFTER TRANSIENT BILLATERAL COMMON CAROTIS ARTERY OCCLUSION (BCCAO)

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ABSTRACT

Background: Stroke is the leading cause of death and major disability in the world that requires treatment and treatment for a long time. There are 50-70% of stroke survivors, 15-30% of patients with permanent disabilities, paralysis, sensory impairment, language disorders, impaired thinking, memory impairment and emotional disturbance. Post-stroke disability causes the patient can not work. It is known that the prefrontal cortex is the most vulnerable area to ischemic because the prefrontal cortex has function as neuropsikatri and motor function.

Object : To determine the effect of black sugarcane (Saccharum officinarum L.) ethanol extract on the number of pyramidal neurons of rat (Rattus norvegicus) brain prefrontal cortex post transient Billateral Common Carotis Artery Occlusion (BCCAO).

Methods : This research is an experimental research using rat research subjects (Rattus norvegicus) amounted to 15 rats. Subjects were divided into 3 groups: Stroke Group, Sham Group and Treatment Group. The data were analyzed using One Way ANOVA statistic test.

Result : There was a significant difference in the number of pyramidal cortex prefrontal cortex of rat brain ($P < 0.05$) between stroke group, sham group and treatment group

Conclusion : Giving extracts of black cane ethanol may inhibit the decrease in the number of pyramidal neurons of rat (Rattus norvegicus) brain prefrontal cortex post transient Billateral Common Carotis Artery Occlusion (BCCAO).

Keywords : Sugarcane, brain ischemia, BCCAO, rats