

ABSTRAK

Kuantitas Neuron Dopaminergik di Ventral Tegmental Area Tikus Model Penyakit Parkinson Dengan Diinduksi Parakuat Diklorida yang Diberi Ekstrak N - Propanolik Tempe Koro Benguk

Rafida Chairunnisa
14/364643/KH/8087

Penyakit Parkinson (PP) adalah penyakit neurodegeneratif yang terjadi karena kelainan fungsi otak. Pada kejadian penyakit Parkinson terdapat penurunan jumlah neuron dopaminergik di ventral tegmental area (VTA) yang dapat menyebabkan gangguan dalam perhatian, memori dan motivasi . Tempe koro benguk mengandung senyawa L-DOPA sebagai prekursor sintesis dopamin pada neuron dopaminergik di VTA sehingga mampu menjadi alternatif pengobatan penyakit parkinson. Penelitian ini bertujuan untuk mengetahui pengaruh pemberian ekstrak n-propanolik tempe koro benguk terhadap kuantitas neuron dopaminergik di ventral tegmental area pada tikus model penyakit parkinson dengan diinduksi parakuat diklorida.

Lima ekor tikus putih jantan dewasa yang diinjeksi parakuat diklorida dengan dosis 7 mg/kg BB secara intraperitoneal dua kali seminggu selama tiga minggu sebagai tikus model penyakit Parkinson dan diwaktu yang sama hewan diberi ekstrak n-propanolik tempe koro benguk dengan dosis 70 mg/kg BB secara oral sehari sekali. Tiga hari setelah perlakuan, tikus percobaan dianestesi, diparfusi, difiksasi dan diambil otak kirinya untuk pembuatan preparat histologi dengan metode parafin dan diwarnai dengan teknik imunohistokimia menggunakan antibodi enzim tiroksin hidrosilase (TH). Area VTA diamati menggunakan mikroskop cahaya, dihitung jumlah neuron dopaminergik secara stereoskopis dan dianalisis secara semi kuantitatif .

Hasil analisis menunjukkan rerata kuantitas neuron dopaminergik pada ventral tegmental area tikus model penyakit Parkinson diinduksi parakuat diklorida yang diberi ekstrak n-propanolik tempe koro benguk sebesar 10669.2 (\pm 1.569).

Kata kunci : ekstrak n-propanolik tempe koro benguk, neuron dopaminergik, parakuat diklorida, penyakit parkinson, ventral tegmental area

ABSTRACT

The Quantity of Dopaminergic Neurons in Ventral Tegmental Area in Mice Model of Parkinson's Disease With Induction of Parakuat Dichloride and N-Propanolic Extract of Tempe Koro Benguk

Rafida Chairunnisa
14/364643/KH/8087

Parkinson's disease (PD) is a neurodegenerative disease that occurs due to brain function disorder. In the case of Parkinson's disease's case, there is a decrease in the number of dopaminergic neurons in the ventral tegmental area (VTA) that caused intrusion in attention, memory and motivation. Tempe koro benguk contains L-DOPA compounds as dopamine synthesis precursors in dopaminergic neurons so as to be an alternative treatment of Parkinson's disease. This study aims to determine the effect of n-propanolic extract of tempe koro benguk towards the quantity of dopaminergic neurons in ventral tegmental area in mice model of parkinson's disease with induction of parakuat dichloride.

Five adult white rats in male gender were being injected with 7 mg / kg BW doses intraperitoneally twice a week for three weeks as mice models of Parkinson's disease. At the same time, the mice were given n-propanolic extract of tempe koro benguk with 70 mg / kg BW dose orally once a day. Three days after the treatment completed, the mice were being anesthetized, diffused, fixed and the right brain were also being taken for histology preparation with paraffin method and stained with immunohistochemical techniques using enzyme thyroxine hydroxylase (TH) antibodies. The Ventral Tegmental area was observed using a light microscope. The quantity of dopaminergic neurons was counted in stereoscopic and it was analyzed semi quantitatively.

The results shows that the quantity of Dopaminergic Neurons in Ventral Tegmental Area in Mice Model of Parkinson's Disease With Induction of Parakuat Dichloride and N-Propanolic Extract of Tempe Koro Benguk is 10.669.2 (± 1.569).

Keywords : dopaminergic neuron, n-propanolic extract of tempe koro benguk, paraquat dichloride, parkinson's disease, ventral tegmental area