

**HUBUNGAN KADAR HIPOCRETIN PLASMA DENGAN
GANGGUAN TIDUR PADA PENDERITA PENYAKIT PARKINSON**



TESIS

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ABSTRAK

Latar belakang : Terjadi banyak area degenerasi otak pada penderita penyakit Parkinson. Proses degenerasi dopaminergik di otak tengah menyebabkan gejala awal dan gangguan tidur. Hipocretin yang diproduksi oleh hipotalamus ikut terlibat dalam patofisiologi penyakit Parkinson. Beberapa hasil penelitian mengenai hubungan kadar hipocretin plasma dengan gangguan tidur pada penderita penyakit Parkinson masih kontroversi

Metode : Penelitian ini merupakan studi *cross sectional* di Poliklinik Neurologi RS Dr. M. Djamil Padang dan RS jejaring. Pada semua subjek penelitian dilakukan pengukuran kadar hipocretin dan gangguan tidur menggunakan ESS. Analisis statistik dilakukan secara komputerasi menggunakan IBM SPSS statistik versi 23.0 *for windows*.

Hasil : Sebanyak 60 pasien penderita penyakit Parkinson dimasukkan dalam penelitian ini, Sebanyak 30 orang subjek mengalami gangguan tidur dan 30 lainnya tidak mengalami gangguan tidur. Terdapat perbedaan signifikan kadar hipocretin plasma lebih rendah pada kelompok Parkinson dengan gangguan tidur, yaitu 82,353 (4,492-149,739) pg/ml dan pada kelompok tanpa gangguan tidur didapatkan kadar hipocretin plasma 112,380 (73,624-848,742) pg/ml ($p=0,000$). Tidak didapatkan perbedaan secara statistik kadar hipocretin plasma berdasarkan derajat EDS penderita penyakit Parkinson ($p >0,05$).

Kesimpulan : Terdapat perbedaan signifikan kadar hipocretin terhadap kelompok gangguan tidur pada penderita penyakit Parkinson. Pada studi ini tidak didapatkan perbedaan secara statistik kadar hipocretin plasma berdasarkan derajat EDS penderita penyakit Parkinson. Degenerasi di area bulbus olfaktori, hipotalamus, dan batang otak

dapat mendahului proses degenerasi dopaminergik di midbrain dan menyebabkan gejala gangguan tidur.

Kata kunci : Penyakit Parkinson, hipocretin, gangguan tidur

THE RELATIONSHIP BETWEEN PLASMA HYPOCRETIN LEVELS AND SLEEP DISORDER IN PATIENTS WITH PARKINSON'S DISEASE

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ABSTRACT

Background : Many cerebral degeneration areas are found in patients with Parkinson's disease. The process of dopaminergic degeneration in the midbrain causes initial symptoms and sleep disturbances. Hypocretin produced by the hypothalamus is involved in the pathophysiology of Parkinson's disease. Several study results regarding the relationship between plasma hypocretin levels and sleep disturbances in patients with Parkinson's disease are still controversial.

Methods: This study is a cross sectional study conducted in the Neurology Polyclinic of Dr. M. Djamil Padang hospital and network hospitals. On all study subjects, hypocretin level was measured and sleep disturbance was assessed using ESS. Statistical analysis was conducted computerized using IBM SPSS statistic version 23.0 for windows.

Results : As many as 60 patients with Parkinson's disease were included in this study. As many as 30 subjects experienced sleep disturbance and the other 30 did not. There was a significant difference of plasma hypocretin level, with lower levels in the group with Parkinson's with sleep disturbance 82,353 (4,492-149,739) pg/ml, while in the group without sleep disturbance, a plasma hypocretin level of 112,380 (73,624-848,742) pg/ml was found ($p=0,000$). There was no statistical difference of plasma hypocretin level based on the severity of EDS in Parkinson's disease patients ($p>0,05$).

Conclusion : There was a significant difference in hypocretin levels between groups of sleep disturbances in patients with Parkinson's disease. This study did not find differentiation of plasma hypocretin level based on the severity of EDS in Parkinson's disease patients. Degeneration in the areas of olfactory bulb, hypothalamus, and brain stem could precede the process of dopaminergic degeneration in the midbrain and cause symptoms of sleep disturbance.

Keywords : Parkinson's disease, hypocretin, sleep disturbance