

**HUBUNGAN KADAR *ALPHA SYNUCLEIN* PLASMA
DENGAN PENYAKIT PARKINSON
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Abstrak

Latar Belakang: Penyakit Parkinson merupakan kelainan neurodegeneratif yang bersifat kronis progresif. Etiologi penyakit Parkinson masih belum jelas sampai saat ini. Pemeriksaan klinis masih merupakan pilihan utama dalam menegakkan diagnosis penyakit Parkinson. *Alpha synuclein* mulai banyak dikaitkan dengan penyakit Parkinson. Akumulasi abnormal *alpha synuclein* diduga bersifat toksik pada sel neuron dopaminergik. Tujuan penelitian membuktikan hubungan *alpha synuclein* dengan penyakit Parkinson.

Metode: Penelitian ini merupakan penelitian observasional komparatif terhadap 49 pasien parkinson yang berobat ke RS. Dr. M. Djamil Padang dan Rumah Sakit Jejaring dan 31 orang kontrol yang sehat sejak Desember 2013-Juni 2014. Pemeriksaan kadar *alpha synuclein* plasma dengan ELISA. Data dianalisis dengan SPSS.

Hasil: Rerata usia pasien $60,10 \pm 7,94$ tahun. Jenis kelamin pria 29 orang (59,2%). Rerata kadar *alpha synuclein* plasma pada pasien parkinson $5,15 \pm 1,44$ ng/ml dan nilai mediannya pada pasien laki-laki $5,26$ (3,21-8,91) ng/ml. Terdapat perbedaan kadar *alpha synuclein* plasma dengan penyakit Parkinson ($p=0,002$). Tidak terdapat perbedaan *alpha synuclein* plasma dengan jenis kelamin pada pasien Parkinson ($p=0,189$). Terdapat hubungan kadar *alpha synuclein* plasma dengan penyakit Parkinson ($p=0,049$). Tidak terdapat hubungan *alpha synuclein* plasma dengan jenis kelamin pada pasien parkinson ($p=0,110$).

Kesimpulan: Terdapat perbedaan kadar *alpha synuclein* plasma dengan penyakit Parkinson dan tidak terdapat perbedaan *alpha synuclein* plasma dengan jenis kelamin pada pasien parkinson. Terdapat hubungan kadar *alpha synuclein* plasma dengan penyakit Parkinson dan tidak terdapat hubungan *alpha synuclein* plasma dengan jenis kelamin pada pasien parkinson.

Kata Kunci: Penyakit Parkinson, *alpha synuclein*.

THE ASSOCIATION BETWEEN PLASM *ALPHA SYNUCLEIN* LEVEL AND PARKINSON'S DISEASE

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Abstract

Background: Parkinson's disease is a chronic progressive neurodegenerative disorder. Its etiology still remains unclear. Clinical examination is still believed as the main method to diagnose the disease. Currently, alpha synuclein has come to be correlated to the Parkinson's disease. Abnormal accumulation of *alpha synuclein* is considered to be toxic to the dopaminergic neurons. The aim of this study is to demonstrate the correlation between the plasm *alpha synuclein* and the Parkinson's disease.

Methods: It is a cross observational comparative study involving 49 patients of the Parkinson's disease treated at the Dr. M. Djamil Padang and other networking hospitals, and the control group of 31 healthy people. It was conducted between December 2013 and June 2014. The level of plasm *alpha synuclein* was examined by ELISA. The SPSS was used to analyse the data.

Results: For the patient group, the mean of age is 60.10 ± 7.94 years old; men is 29 (59.2%); the mean of plasm *alpha synuclein* level is 5.15 ± 1.44 ng/ml and the median for male patient is 5.26 (3.21-8.91) ng/ml. There is different between plasm *alpha synuclein* level and the Parkinson's disease ($p=0,002$). There is no different between plasm *alpha synuclein* level and sex of the patient ($p=0,189$). There is association between plasm *alpha synuclein* level and the Parkinson's disease ($p=0,049$). There is no association between plasm *alpha synuclein* level and sex of the patient ($p=0,110$).

Conclusion: There is different between plasm *alpha synuclein* level and the Parkinson's disease, but there is no different between plasm *alpha synuclein* level and sex of the patient. There is association between plasm *alpha synuclein* level and the Parkinson's disease, but there is no association between plasm *alpha synuclein* level and sex of the patient.

Key words: Parkinson's disease, *alpha synuclein*