KADAR BETA AMYLOID 42 PLASMA PADA PENYAKIT PARKINSON DAN HUBUNGANNYA DENGAN SUBTIPE MOTORIK

TESIS

Oleh:

dr. Attiya Istarini
1550302028

Pembimbing:

Dr. dr Yuliarni Syafrita, Sp.S(K)
dr. Restu Susanti, Sp.S. M. Biomed

PROGRAM STUDI DOKTER SPESIALIS NEUROLOGI
FAKULTAS KEDOKTERAN UNIVERSITAS ANDALAS
RSUP DR.M. DJAMIL
PADANG
2020

KADAR BETA AMYLOID 42 PLASMA PADA PENYAKIT PARKINSON DAN HUBUNGANNYA DENGAN SUBTIPE MOTORIK

ABSTRAK

Latar Belakang: Penyakit Parkinson (PD) adalah penyakit neurodegeneratif kronik progresif yang secara klinis diklasifikasikan menjadi subtipe tremor dan *postural instability and gait difficulty* (PIGD). Subtipe PIGD memiliki gejala motorik lebih berat dibandingkan tremor. *Biomarker* Beta Amyloid 42 (Aβ-42) diduga berperan dalam progresivitas penyakit PD melalui interaksinya dengan protein Alfa Sinuklein. Tujuan penelitian ini untuk mengetahui kadar Aβ-42 plasma penyakit Parkinson dan hubungannya dengan subtipe motorik.

Metode: Penelitian ini menggunakan desain *cross sectional*. Sampel dipilih dengan metode *consecutive sampling*. Semua subjek diperiksa kadar Aβ-42 plasma. Subtipe motorik PD diklasifikasikan berdasarkan rasio skor motorik MDS-UPDRS. Analisa statistik menggunakan SPSS dengan nilai $p < 0.05$ dianggap bermakna secara statistik.

Hasil: Penelitian ini terdiri dari 50 orang penderita Parkinson dan 20 orang kontrol. Pada kelompok PD, didapatkan rerata usia penderita 63,30±8,1 tahun dan median kadar Aβ-42 plasma 29,01 ng/L. Dari 50 penderita, 44 % berada pada stadium *Hoehn and Yahr* II dan 56% memiliki subtipe tremor. Setelah dianalisis, tidak terdapat perbedaan bermakna kadar Aβ-42 plasma penderita PD dan kontrol (p=0,28). Terdapat kecenderungan peningkatan kadar Aβ-42 plasma pada subtipe PIGD. Namun setelah dianalisis tidak ditemukan hubungan kadar Aβ-42 plasma dengan subtipe motorik (p= 0,07).

Kesimpulan: Pada penelitian ini median kadar Aβ-42 plasma penderita PD 29,01 ng/L. Tidak terdapat perbedaan kadar Aβ-42 plasma penderita PD dan kontrol. Kadar Aβ-42 plasma cenderung lebih tinggi pada subtipe PIGD, namun tidak ditemukan hubungan kadar Aβ-42 plasma dengan subtipe motorik.

Kata kunci: Penyakit Parkinson, kadar Aβ-42 plasma, subtipe motorik

BETA AMYLOID 42 PLASMA LEVELS IN PARKINSON'S DISEASE AND ITS RELATIONSHIP WITH MOTOR SUBTYPES

ABSTRACT

Background*: Parkinson's disease (PD) is a chronic progressive neurodegenerative disease that is clinically classified as a tremor and postural instability and gait difficulty (PIGD) subtype. The PIGD subtype has more severe motor symptoms than tremor. Beta Amyloid 42 (Aβ-42) is a biomarker that presumably plays a role in the progression of PD disease through its interaction with the Alpha Sinuclein protein. The purpose of this study was to determine plasma Aβ-42 levels of PD patients and its relationship to motor subtypes.*

Method*: This was a cross-sectional study. Consecutive patients with parkinson disease were included.. Plasma Aβ-42 level was examined in all subjects. Parkinson's disease motor subtypes are classified based on MDS-UPDRS. SPSS was used for statistical analysis. $p < 0.05$ was considered statistically significant.*

Results*: The analysis included 70 subjects, consist of 50 PD patients and 20 controls. The mean age of patients with PD 63.30 ± 8.1 years and median Aβ-42 plasma levels is 29.01 ng/L. Analysis of 50 patients, 44% were at Hoehn and Yahr II and 56% had a tremor subtype. After analysis, there is no significant difference plasma Aβ-42 levels in PD patients and controls ($p = 0.28$). There is a tendency of plasma Aβ-42 levels increasing in the PIGD subtype. However, there is no correlation between plasma Aβ-42 levels and motor subtypes ($p = 0.07$).*

Conclusion*: The median Aβ-42 plasma levels in PD patients was found to be decreased, but there was no significant difference between Aβ-42 plasma levels in PD patients and controls. Plasma Aβ-42 levels tend to be higher in the PIGD subtype, but there is no correlation between plasma Aβ-42 levels and motor subtypes.*

Keywords*: Parkinson's disease, plasma Aβ-42 levels, motor subtypes*