



**ASSOCIATION BETWEEN STAVUDINE ADMINISTRATION
WITH LIPODYSTROPHY AND DYSLIPIDEMIA AMONG
HIV-INFECTED PATIENTS IN DR. KARIADI HOSPITAL
SEMARANG**

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Degree**

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DECLARATION OF APPROVAL

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Hereby declare that:

- 1) This thesis was an original research and had never been published for any academic title in Diponegoro University or other universities.
- 2) This thesis was author's pure idea, formulation and research without others' help except thesis supervisor and other parties acknowledged by thesis supervisor.
- 3) In this research there were no works or opinions written or published by other authors unless the original author and his work were cited and mentioned in the references.

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PREFACE

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LIST OF ABBREVIATIONS

3TC	: Lamivudine
AIDS	: Acquired Immunodeficiency Syndrome
ART	: Anti Retroviral Therapy
AZT	: Zidovudine
CD4	: Cluster of Differentiation 4
d4T	: Stavudine
DNA	: Deoxyribonucleic Acid
HDL-c	: High Density Lipoprotein Cholesterol
HIV	: Human Immunodeficiency Virus
LDL-c	: Low Density Lipoprotein Cholesterol
TC	: Total Cholesterol
TG	: Triglycerides
NRTI	: Nucleoside Reverse Transcriptase Inhibitor
NNRTI	: Non Nucleoside Reverse Transcriptase Inhibitor
NtRTI	: Nucleotide Reverse Transcriptase Inhibitor
PI	: Protease Inhibitor
RNA	: Ribonucleic Acid

HUBUNGAN ANTARA PEMBERIAN STAVUDINE DENGAN LIPODISTROFI DAN DISLIPIDEMIA PADA PENDERITA INFEKSI HIV DI RSUP DR. KARIADI SEMARANG

ABSTRAK

Jacob Bunyamin¹, Muchlis A.U. Sofro²

Latar belakang: Pemberian stavudin (d4T) berkontribusi terhadap penurunan angka kematian pada penderita HIV. Di lain pihak, stavudin diketahui menimbulkan efek samping yang serius seperti lipodistrofi dan dislipidemia. Kedua efek samping tersebut dapat meningkatkan resiko terjadinya komplikasi pada jantung dan pembuluh darah.

Tujuan: Penelitian ini bertujuan untuk mengetahui hubungan antara pemberian stavudin dengan lipodistrofi dan dislipidemia pada penderita HIV di RSUP Dr. Kariadi dan juga mengetahui faktor-faktor yang berhubungan dengan lipodistrofi dan dislipidemia.

Metode: Penelitian ini adalah penelitian observasional analitik dengan metode belah lintang. Empat puluh sampel dibagi menjadi kelompok stavudin (23 sampel) dan kelompok kontrol (17). Seluruh responden diperiksa profil lipid dan lipodistrofi oleh dokter jaga di klinik VCT RSUP Dr. Kariadi. Data yang diperoleh dianalisis menggunakan uji Chi-Square dan uji Fisher.

Hasil: Prevalensi lipodistrofi sebesar 21,7% dan dislipidemia 82,6% pada kelompok stavudin. Pemberian stavudin berhubungan signifikan dengan dislipidemia ($p=0.008$) terutama pada kenaikan trigliserida dan penurunan kolesterol HDL ($p=0.048$ dan $p=0.009$). Pemberian stavudin tidak berhubungan signifikan dengan lipodistrofi ($p=0.051$) walaupun stavudin berhubungan dengan lipodistrofi pada pantat dan wajah ($p=0.026$ dan $p=0.013$). Jenis kelamin perempuan berhubungan dengan lipodistrofi pada kelompok stavudin ($p=0.014$). Jenis kelamin, umur, hitung CD4 dan durasi terapi tidak berhubungan dengan dislipidemia pada kelompok stavudin.

Kesimpulan: Pemberian stavudin berhubungan dengan dislipidemia pada penderita HIV di RSUP Dr. Kariadi dan tidak berhubungan dengan lipodistrofi.

Kata kunci: stavudin, lipodistrofi, dislipidemia, HIV

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ABSTRACT

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Background: Stavudine (d4T) administration has contributed in decreasing mortality rate of HIV-infected patients. In the other hand, stavudine is known to cause serious side effects such as lipodystrophy and dyslipidemia. Both side effects are known to increase the risk of developing cardiovascular complications.

Aims: This study aimed to determine the association between stavudine administration with lipodystrophy and dyslipidemia among HIV-infected patients in Dr. Kariadi Hospital and also determine the factors associated with lipodystrophy and dyslipidemia.

Methods: This study was an observational analytic study using cross-sectional method. Forty samples were divided into stavudine group (23 samples) and control group (17). All respondents had their lipid profile observed and lipodystrophy assessed by attending physicians in VCT clinic Dr. Kariadi Hospital. Obtained data were analyzed using Chi-Square Test and Fisher's Exact Test.

Results: The prevalence of lipodystrophy was 21.7% and dyslipidemia was 82.6% in stavudine group. Stavudine administration was significantly associated with dyslipidemia ($p=0.008$) especially in triglycerides elevation and HDL-c depletion ($p=0.048$ and $p=0.009$). Stavudine administration was not significantly associated with lipodystrophy ($p=0.051$) although it was associated with lipoatrophy of buttock and face ($p=0.026$ and $p=0.013$). Being female was associated with lipodystrophy incidence in stavudine group ($p=0.014$). Sex, age, CD4 count, and duration of treatment were not associated with dyslipidemia in stavudine group.

Conclusion: Stavudine administration was associated with dyslipidemia among HIV-infected patients in Dr. Kariadi Hospital and was not associated with lipodystrophy.

Keywords: stavudine, lipodystrophy, dyslipidemia, HIV

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