

# Profil lipodistrofi dan dislipidemia pada pasien prepubertas dengan HIV yang mendapat terapi ARV di Rumah Sakit Cipto Mangunkusumo = Profile of lipodystrophy and dyslipidemia in prepubertal HIV infected children in Cipto Mangunkusumo Hospital

Yessy Yuniarti, author

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## Abstrak

[<b>ABSTRAK</b><br>

Latar Belakang: Terapi kombinasi antiretroviral (ARV) telah berhasil menurunkan angka morbiditas dan mortalitas pasien HIV, namun efek samping jangka panjang dapat menimbulkan perubahan distribusi lemak tubuh yang dikenal dengan sindrom lipodistrofi. Pasien HIV yang mengalami lipodistrofi berisiko mengalami gangguan metabolik yang dapat menyebabkan terjadinya penyakit kardiovaskular.

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Tujuan: Mengidentifikasi adanya lipodistrofi dan dislipidemia pada pasien prepubertas dengan HIV yang mendapatkan terapi ARV jangka panjang.

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Metode: Penelitian potong lintang dilakukan pada 76 pasien HIV usia prepubertas yang kontrol rutin di Poli Alergi Imunologi RSCM. Subyek dilakukan pemeriksaan klinis lipodistrofi oleh tenaga klinis terlatih menggunakan kriteria dari the European Paediatric Group of Lipodystrophy. Selain itu juga dilakukan pemeriksaan tebal lipatan kulit (TLK) triceps dan subscapular, lingkaran pinggang, serta rasio lingkaran pinggang-panggul. Data kadar CD4 awal, status gizi awal terdiagnosis, jenis terapi ARV, dan lama terapi ARV diambil dari rekam medis. Subyek juga dilakukan analisis diet, pemeriksaan profil lipid dan gula darah puasa.

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Hasil: Pada subyek prepubertas dengan HIV yang mendapatkan terapi ARV yang mengalami lipodistrofi dan dislipidemia berturut-turut sebanyak 47% dan 46%. Subyek yang mengalami lipodistrofi berupa lipohipertrofi (35%), lipoatrofi (5%), dan tipe campuran (7%). Subyek yang mengalami lipodistrofi pada umumnya memiliki massa lemak tubuh, serta TLK triceps dan subscapular yang normal. Pada subyek dengan lipohipertrofi dan tipe campuran seluruhnya memiliki rasio lingkaran pinggang-panggul yang meningkat. Terdapat hubungan yang signifikan antara penggunaan regimen ARV kombinasi 2 nucleoside reverse transcriptase inhibitor (NRTI)+ protease inhibitor (PI) meningkatkan risiko 6,9 kali untuk terjadinya dislipidemia ( $p=0,001$ , IK95% 2,03-23,7) dibandingkan regimen 2NRTI+ non-nucleoside reverse transcriptase inhibitor (NNRTI).

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Simpulan: Prevalensi lipodistrofi dan dislipidemia cukup tinggi pada pasien prepubertas dengan HIV yang mendapatkan terapi ARV. Pada umumnya subyek yang mengalami lipodistrofi pada penelitian ini adalah tipe lipohipertrofi.

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<b>ABSTRACT</b><br>

Background: Antiretroviral (ARV) combination therapy has significantly reduced morbidity and mortality

in HIV-infected children. Long-term adverse effect of ARV is lipodystrophy syndrome. Lipodystrophy associated with metabolic disturbances which can cause cardiovascular disease.

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Objective: To identify lipodystrophy and dyslipidemia in prepubertal HIV-infected patients receiving long-term ARV therapy.

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Methods: Cross sectional study including 76 prepuberty HIV-infected children was performed by clinical and medical records review in Allergy Immunology Ward Cipto Mangunkusumo Hospital. Clinical examination of lipodystrophy was assessed by a trained clinician using the European Pediatric Group of Lipodystrophy criteria. We also assessed triceps and subscapular skinfold thicknesses, waist ratio, and waist-hip ratio. CD4 level and nutritional status at beginning therapy, ARV regimens, and duration ARV therapy were reviewed from medical records. We also performed diet analysis and laboratory examination such as lipid profiles and fasting glucose.

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Results: Prevalence of lipodystrophy and dyslipidemia in prepubertal HIV-infected children who receiving ARV were 47% and 46%. Subjects with lipodystrophy consisted of lipohypertrophy (35%), lipodystrophy (5%), and mixed type (7%). Subjects with lipodystrophy majority had normal triceps and subscapular skinfold thicknesses and normal total body fat. All subjects with lipohypertrophy and mixed type had an increasing waist-hip ratio. Regimen of 2 nucleoside reverse transcriptase inhibitors (NRTI) + protease inhibitor (PI) increased 6,9 times risk of dyslipidemia compare with 2NRTI+ non-nucleoside reverse transcriptase inhibitor (NNRTI) regimen ( $p=0,001$ , 95% CI 2,03-23,7).

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Conclusion: The prevalence of lipodystrophy and dyslipidemia are high among prepuberty HIV-infected children on antiretroviral therapy. Majority of subjects with lipodystrophy in this study were lipohypertrophy type., Background: Antiretroviral (ARV) combination therapy has significantly reduced morbidity

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