

REFERENCES

1. Hoffmann C, Rockstroh JK. HIV 2012/2013. Hamburg: Medizin Fokus Verlag; 2012:280-90.
2. UNAIDS . Global Report: UNAIDS report on the global AIDS epidemic 2013. Geneva: Joint United Nations Programme on HIV/AIDS; 2013:8-15.
3. Ditjen PP&PL Kementerian Kesehatan RI. Laporan Situasi Perkembangan HIV&AIDS di Indonesia Triwulan IV Tahun 2013. Jakarta: Ditjen PP & PL Kementerian Kesehatan RI; 2013:14-24.
4. Joly V, Flandre P, Meiffredy V, Leturque N, Harel M, Aboulker P, et al. Increased risk of lipodystrophy under stavudine in HIV-1-infected patients: results of a substudy from a comparative trial. *AIDS*. 2002;16: 2447-54.
5. Piloya T, Bakeera-Kitaka S, Kekitiinwa A, Moses RK. Lipodystrophy among HIV-infected children and adolescents on highly antiretroviral therapy in Uganda: a cross sectional study. *Journal of International AIDS Society*. 2012;15(2):174-7.
6. Longo D, Fauci A, Kasper D, Hauser S, Jameson J, Loscalzo J. Harrison's Principles of Internal Medicine, 18th edition. Philadelphia: McGraw-Hill; 2011: 1137-64.
7. Troll, GJ. Approach to dyslipidemia, lipodystrophy, and cardiovascular risk in patients with HIV infection. *Curr Atherosclerotic Repository*. 2011;13:51-6.

8. World Health Organization. Consolidated guidelines on the use of antiretroviral drugs for treating and preventing HIV infection. Geneva: World Health Organization; 2013:27-35.
9. Villaroya F, Domingo P, Giralt M. Lipodystrophy associated with highly active retroviral therapy in HIV infection: the adipocyte as a target of antiretroviral-induced mitochondrial toxicity. *Trends Pharmacology Sciences*. 2005;26(2):88-93.
10. Pujari SN, Dravid A, Naik E, Bhagat S, Tash K, Nadler JP, et al. Lipodystrophy and dyslipidemia among patients taking first-line, world health organization recommended highly active antiretroviral therapy regimens in western india. *Acquired Immune Deficiency Syndrome*. 2005;39:199-202.
11. Liu E, Armstrong C, Spiegelman D, Chalamilla G, Njelekela M, Hawkins C, et al. First-line antiretroviral therapy and changes in lipid levels over 3 years among HIV-infected adults in Tanzania. *CID*. 2013;56:1820-27.
12. Ceccato MGB, Bonolo PF, Souza Neto AI, Araujo FS, Freitas MIF. Antiretroviral therapy associated dyslipidemia in patients from a reference center in Brazil. *Brazilian Journal of Medical and Biological Research*. 2011;44:1177-83.
13. Katzung BG, Trevor AJ, Masters SB. *Basic and Clinical Pharmacology* 12th edition. Philadelphia: Lange; 2011:874-5.
14. Wangsomboonsri W, Mahasirimongkol S, Chantarangsu S, Kiertiburanakul, Charoenyingwattana A, Komindr S, et al. Association

- between HLA-B*4001 and lipodystrophy among HIV-infected patients from Thailand who received a stavudine containing antiretroviral regimens. *CID*. 2010;50:597-604.
15. Domingo P, Cabeza MC, Pruvost A, Torres F, Salazar J, del Mar Gutierrez M, et al. Association of thymidine synthase gene polymorphisms with stavudine triphosphate intracellular levels and lipodystrophy. *Antimicrobial Agents and Chemotherapy*. 2011;55:1428-35.
 16. Domingo P, Cabeza MC, Pruvost A, Salazar J, del Mar Gutierrez M, Mateo MG, et al. Relationship between HIV/highly active antiretroviral therapy-associated lipodystrophy syndrome and stavudine-triphosphate intracellular levels in patients with stavudine-based antiretroviral regimens. *CID*. 2010;50:1033-39.
 17. Ditjen PP&PL Kementerian Kesehatan RI. Pedoman Nasional Tatalaksana Klinis Infeksi HIV dan Terapi Antiretroviral pada Orang Dewasa dan Remaja. Jakarta: Ditjen PP & PL Kementerian Kesehatan RI; 2011:20-32.
 18. Omech B, Sempa J, Castelnuovo B, Opio K, Otim M, Mayanja-Kizza H, et al. Prevalence of HIV-associated metabolic abnormalities among patients taking first line antiretroviral therapy in Uganda. *IRSN AIDS*. 2012;18(5): 57-62.
 19. AACE. American Association of Clinical Endocrinologists guidelines for management of dyslipidemia and prevention of atherosclerosis. Jacksonville: AACE; 2012:3-12.

20. Tadewos A, Addis Z, Ambachew H, Banerjee S. Prevalence of dyslipidemia among HIV-infected patients using first line highly active antiretroviral therapy in Southern Ethiopia: a cross sectional comparative group study. *AIDS Research and Therapy*. 2012;9:31-6.
21. Grinspoon S, Carr A. Cardiovascular risk and body fat abnormalities in HIV-infected adults. *New England Journal of Medicine*. 2005;352:48-62.
22. Bennett MT. Current and future treatments of HIV-associated dyslipidemia. *Future Lipidology*. 2008;3(2):175-188.
23. Lagathu C, Eustace B, Prot M, et al. Some HIV antiretrovirals increase oxidative stress and alter chemokine, cytokine or adiponectin production in human adipocytes and macrophages. *Antiviral Therapy*. 2007;12(4):489-500.
24. Fellay J, Boubaker K, Ledergerber B, et al. Prevalence of adverse events associated with potent antiretroviral treatment: Swiss HIV cohort study. *Elsevier*. 2001;358:1322-27.
25. Swiecki P, Firlaq-Buckacka E, Bakowska E, Ignatowska A, Pulik P, Horban A. Study comparing lipid metabolism disorders and effectiveness of treatment in HIV-infected patients on long-term treatment with various thymidine analogue. *HIV&AIDS Review*. 2008;7(2):19-22.
26. Oh SW, Yoon YS, Lee ES, Kim WK, Park C, Lee S, et al. Association between cigarettes smoking and metabolic syndrome: the Korea National Health and Nutrition Examination Survey (Brief Report). *Diabetes Care*. 2005;28: 2064-66.

27. Miller J, Carr A, Emery S et al. HIV lipodystrophy: prevalence, severity, and correlates of risk in Australia. *HIV Med.* 2003;4(3):293-301.
28. Feleke Y, Fekade D, Mezegebu Y. Prevalence of highly active antiretroviral therapy associated metabolic abnormalities and lipodystrophy in HIV-infected patients. *Ethiop Med Journal.* 2012;50(3):221-30.
29. Carter VM, Hoy JF, Bailey M, Colman PG, Nyulasi I, Mijch AM. The prevalence of lipodystrophy in an ambulant HIV-infected population: it all depends on the definition. *HIV Med.* 2001;2(3):174-180.
30. Van Griensven J, De Naeyer L, Mushi T et al. High prevalence of lipoatrophy among patients on stavudine-containing first-line antiretroviral therapy regimens in Rwanda. *Elsevier.* 2007;101;793-8.
31. Andany N, Raboud JM, Walmsley S et al. Ethnicity and gender differences in lipodystrophy of HIV-positive individuals taking antiretroviral therapy in Ontario, Canada. *HIV Clin Trials.* 2011;12(2);89-103.
32. Aragonés G, Alonso-Villaverde C, Pardo-Reche P et al. Antiretroviral treatment-induced dyslipidemia in HIV-infected patients is influenced by the *APOC3*-related rs10892151 polymorphism. *BMC Medical Genetics.* 2011;12;120-6.
33. Anastos K, Lu D, Shi Q et al. Association of serum lipid levels with HIV serostatus, specific antiretroviral agents, and treatment regimens. *J Acquir Immune Defic Syndr.* 2007;45(1);34-42.

34. Manuthu, EM. Prevalence of dyslipidemia and dysglycemia in HIV-infected patients at the Kenyatta National Hospital. *EAMJ*. 2008;85(1):10-7.
35. Hadigan C, Mazza S, Crum D, Grinspoon S. Rosiglitazone increases small dense low-density lipoprotein concentration and decreases high-density lipoprotein particle size in HIV-infected patients. *AIDS*. 2007;21:2543-46.
36. Gordon DJ, Probstfield JL, Garrison RJ, et al. High-density lipoprotein cholesterol and cardiovascular disease: four prospective american studies. *Circulation*. 1989;79:8-15.
37. Fisac C, Fumero E, Crespo M et al. Metabolic benefits 24 months after replacing a protease inhibitor with abacavir, efavirenz or nevirapine. *AIDS*. 2005;19(9):17-25.
38. Schewe CK, Maserati R, Wassmer G, Adam A, Weitner L. Improved lipid profiles and maintenance of virologic control in heavily pretreated HIV-infected patients who switched from stavudine to tenofovir treatment. *CID*. 2006;42(1):145-7.
39. Ng GWB, Chan UMS, Li PCK, Wong WCW. Can a Mediterranean diet reduce the effects of lipodystrophy syndrome in people living with HIV? A pilot randomised controlled trial. *Sexual Health*. 2011;8(1):43-51.
40. Szafran H, Smielak-Korombel W. The role of estrogens in hormonal regulation of lipid metabolism in women. *Przeql Lek*. 1998;55(5):266-70.