

CD4 LEVELS AND ADHERENCE TO ANTIRETROVIRAL IN HIV-AIDS PATIENTS WITH SKIN COMPLAINTS

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Background

HIV/AIDS infection is still a global problem. The comorbidities due to ARVs and opportunistic infections due to HIV/AIDS have increased the productivity and quality of life of PLWHA. This condition is quite rare but can affect the clinical condition of PLHA with mild, moderate or severe skin manifestations. A total of 213 cases of HIV-related dermatitis were published in mid 2016. This condition can be caused directly by HIV/AIDS, opportunistic infections, or also due to the effects of

Objectives

This study discusses clinical characteristics, CD4 cell counts, and consumption of ARV drugs in HIV/AIDS patients with skin complaints at Bethesda Hospital and Gedongtengen Health Center.

Methods and Subjects

This study uses a descriptive study design with primary data on HIV / AIDS patients in Bethesda Hospital and Gedongtengen Health Center in Yogyakarta. Criteria for inclusion of subjects were HIV / AIDS patients according to the diagnosis of a doctor who took a combination ARV for at least 3 months and was able to resolve skin complaints. Exclusion criteria were patients who rejected to be included in the research or have incomplete medical record data. The data that was taken are basic data on age, sex, comorbidities, laboratory results (CD4 cell count, viral load), regimen of antiretroviral drugs consumed, agreed (MMAS Questionnaire 8), and the description of the skin abnormalities. The research subjects were carried out by means of non-probability, easy sampling (snowball sampling).

References

1. AIDSinfo. 2016. *Guidelines for the Use of Antiretroviral Agents in HIV-1-Infected Adults and Adolescents* [Internet] diunduh dari <http://aidsinfo.nih.gov/guidelines> diakses pada 10 Maret 2017
2. Chen TM, Cockerell CJ. 2003. Cutaneous Manifestations of HIV infection and HIV-related Disorder. In: Bologna JL, Jorizzo JL, Rapini R, editor. *Dermatology*. Volume 1. Mosby 2003. Chapter 78.
3. Direktorat Jenderal P2PL, Kementerian Kesehatan RI. 2012. *Pedoman Nasional ARV 2011*, Jakarta.
4. Goh BK, Chan RK, Sen P, Theng CT, Tan HH, Wu YJ, et al. Spectrum of skin disorders in human immunodeficiency virus infected patients in Singapore and the relationship to CD4 lymphocyte counts. *Int J Dermatol*. 2007;46:695-9.
5. Indah Sari L.D, Afif Nurul H. 2015. Surabaya. *Manifestation of Skin Disorder in HIV/AIDS Patients*. BIKKK - Berkala Ilmu Kesehatan Kulit dan Kelamin - Periodical of Dermatology and Venereology Vol. 27 / No. 2 / Agustus 2015
6. Murphy, R. 2003. Defining the Toxicity Profile of Nevirapine and Other Antiretroviral Drugs. *Journal of Acquired Immune Deficiency Syndrome*; 34:S15-20.

Results

- There were thirty one study subjects, 22 of whom were men and 9 were women with an age range of 21 - 55 years.
- The CD4 levels of 4 subjects varied from as low as 113 cells / uL to as high as 650 cells / uL.
- Compliance with medication: high in 8 people (26.67%), moderate consent of 16 people (53.3%), and low agree on 6 people (20%).
- Types of skin disorders found on the subject include pruritus (pruritic papular eruption), prurigo simplex, post-inflammatory hyperpigmentation, stadium syphilis 2, hyperhidrosis / interdigital candidosis, drug eruption, scabies, herpes scars, xerotic skin, bacterial infection (ectima).

Skin Manifestation



PPE/Pruritic papular eruption



Bacterial infection: ectima



Syphilis stage 2

Discussion

Viruses The main target of HIV is part of lymphocytes that originate from the thymus, namely T helper cells. CD4 cells are also available in skin tissue such as Langerhans cells. Epidermal Langerhans cells can be avoided by HIV, this decline in function is responsible for several manifestations of skin disorders in HIV / AIDS patients. The current combination ARV therapy for HIV / AIDS patients is the first line of the long-term NRTI and NNRTI combination, namely non-thymidine backbone NRTIs (tenofovir + emtricitabine or tenofovir + lamivudine) and one NNRTI (Efavirenz) long-term NVP are rashes and hepatotoxicity, which usually occurs within the first 12 weeks. Factors that increase the risk of severe rash include the use of full dosage on the onset of medication (as opposed to half a dosage as suggested) and not stopping NVP when the rash occurs. Women are more likely to get a rash. The use of a single dose NVP is less likely to cause a rash.

Conclusion

Skin disorders are found in HIV patients as a disease progression consisting of herpes simplex, syphilis stage 2, scabies, candidosis, xerotic skin and also because of the effects of ARV therapy containing drug eruptions and hyperpigmentation. Skin disorders do not match the level of compliance required by ARVs. Skin disorders related to CD4 levels of HIV patients specifically for opportunistic infections, but for abnormalities of drug effects, are not related to CD4 levels.



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