



# **Study of immune response in HIV/AIDS patients to HAART using CD4 count progress at six months of therapy initiation**

Geme Urge, Addis Ababa University, Faculty of Medicine,  
Addis Ababa, Ethiopia.

Tesfaye Legesse, Yirgalem Hospital, Southern Ethiopia

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# Objectives



General Objective:

To determine the immune response of HIV/AIDS patients to combination drugs of Anti-HIV.

Specific objectives:

1. To determine the progress of CD4 cell count of HIV/AIDS patients at six months of using HAART.
2. To provide base line data on immunological response to HAART in Ethiopia.



# Methods (1)



- A retrospective data (1<sup>st</sup> of January to 31<sup>st</sup> of May 2006) was obtained from patient records at ART unit of Yirgalem Hospital, Southern Ethiopia.
- The CD4 count was obtained at initiation of HAART and at six months of HAART use.
- A total of 101 patients adhered to HAART records were obtained. The CD4 count was done by FACS CD4 counter.



# Methods (2)



- Majority of the cases (89%) were taking a triple combination of Stavvudine, Lamivudine and Nevirapine and the rest were taking a combination Stavvudine, Lamivudine and Efavirentz.
- SPSS statistical package was used in the analysis of data.
- Ethical clearance was obtained from Ethical Committee of SMLT of Addis Ababa University and Yirgalem Hospital.



# Results (1)



- In this study the median age was 32 years. Among the study subjects, 44.5% were males and 55.5% were females.
- The overall improvement of CD4 count was found to be 175cells/mm<sup>3</sup> with in six months of HAART use.
- The mean CD4 cells improvement in male patients was 153 cells/mm<sup>3</sup> from the baseline of 98 cells/mm<sup>3</sup>.



## Results (2)



- The mean improvement of CD4 cell count for females was 186 cells/mm<sup>3</sup> from the baseline of 107 cells/mm<sup>3</sup>.
- A decrement in CD4 cell count was observed in one patient among the study subjects.
- Overall there was a significant progress in the CD4 cell count of the patients with in six months of HAART use.



# Discussion & Conclusions



- The use of HAART has improved the immune response of the body. Following successful initiation of HAART, a rise in CD4 lymphocyte count of 90-150 cells/mm<sup>3</sup> would be expected in one year. In the present study, except 3 subjects progress in CD4 cell count was greater than the figure mentioned above.
- There was no significant difference in the two kinds of anti-HIV combination drugs.
- ART results in maximal viral suppression & leads to robust and durable immunological response as measured by CD4 count.



# Future perspectives



- Ethiopia is one of the seriously affected country by HIV/AIDS. To lengthen the disease free survival and improve the quality of life, ART is the only means. Therefore further studies should be conduct on large scale cases and use of HAART should be highly encouraged in Ethiopia where the culture of secrecy is prominent.