



A CLINICAL STUDY OF ANTI RETROVIRAL TREATMENT OUTCOME IN ADULT HIV PATIENTS

Medicine

Dr. Devabhaktuni Siva Sankar* Assistant Professor of Medicine, NRI Medical College & General Hospital, Chinakakani - 522503. Mangalagiri, Guntur, Andhra Pradesh. *Corresponding Author

Dr. Shaik Khaja Rassul Assistant Professor of Medicine, NRI Medical College & General Hospital, Chinakakani - 522503. Mangalagiri, Guntur, Andhra Pradesh.

ABSTRACT

It's a clinical study on treatment outcome of HAART (Highly Active Anti Retroviral Therapy) in adult HIV cases. The clinical study evaluated immunological response, clinical response and functional status improvement after anti retroviral therapy.

KEYWORDS

HAART (Highly Active Anti Retroviral Therapy)

INCLUSION CRITERIA:

1. The diagnosis of HIV confirmed as per WHO criteria
2. Initiation of Treatment for HIV infected patients according to WHO criteria
3. Patients should be more than 14 years of age

EXCLUSION CRITERIA:

1. Patients less than 14 years of age.
2. The patients who have already received treatment with antiretroviral drugs outside
3. Patients who died within 6 months after initiation of antiretroviral therapy.
4. Patients who lost follow-up after initiation of anti-retroviral therapy

RESULTS

After 6 months of initiating therapy, patient was examined in detail for change in body weight, functional status of the patient, clinical staging as per WHO, opportunistic infections and CD 4 count.

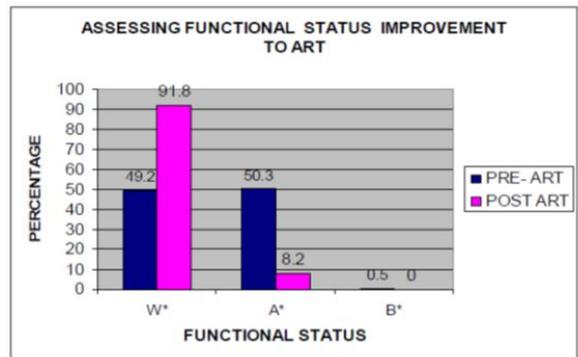


Fig:3 Functional status Pre ART and Post ART - W- working, A- ambulatory, B- bedridden

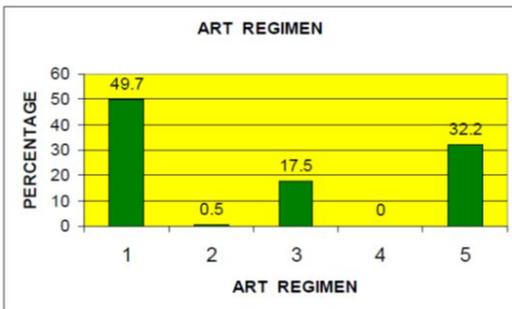


Fig:1 Anti retroviral therapy regimens labelled as follows

Regimens include

- 1- STV+LMV+NVP
- 2- STV+LMV+EFV
- 3- ZDV+LMV+NVP
- 4- ZDV+LMV+EFV
5. Change of regimen within above categories during treatment

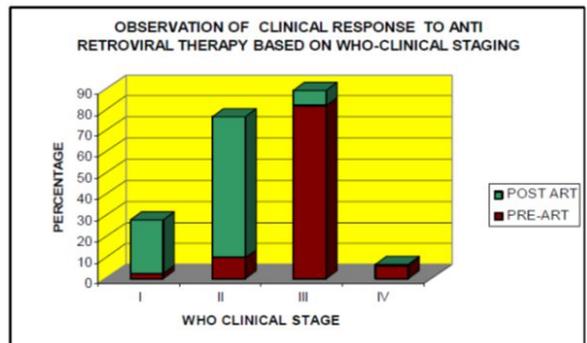


Fig: 4 Clinical response to ART - percent change in each WHO clinical stage

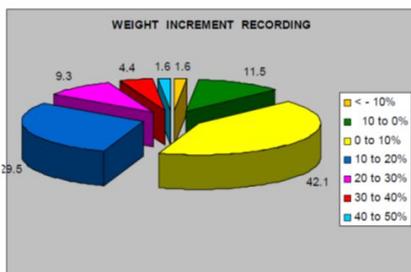


Fig:2 Weight increment percentage in Pre ART and Post ART

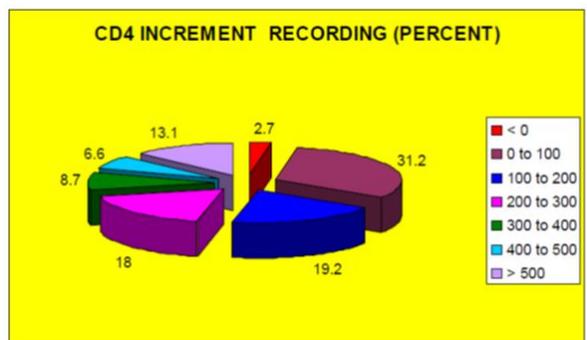


Fig: 5 Immunologic response to ART - percent increase in CD4 count

DISCUSSION:

In the present clinical study, the treatment outcome of anti retroviral therapy studied in terms of clinical response, functional status and immunological response in adult HIV cases. The category 1 ART regimen accounted for 49% cases and category 3 ART regimen for 17.5%. The change in regimen category 5 accounts for 32% due to substitution of Efavirenz for Nevirapine due to drug intolerance. In this study, Stavudine based ART regimen is often preferred to Zidovudine based ART as initial therapy because of co-existence of anaemia unsuitable for Zidovudine based regimen. An average of 4 kg increase in weight is seen among the study group after ART. Over 71% cases showed weight gain of 0-20% after ART while 13% showed decline in weight.

The functional status of an individual is divided into three grades according to NACO - National AIDS Control Organisation. W- Able to perform usual work, A- Able to perform activities of daily living but not able to work, B- Not able to perform activities of daily living. In this study, there is an improvement in functional status level in response to ART as evidenced by an increase in patients belonging to "W" class from 49 % to 91% after treatment and decrease in patients of "A" class from 50% to 8% after treatment.

WHO classified HIV in adults into four clinical stages based on clinical factors and opportunistic infections. In this study there is marked clinical improvement after ART. This is reflected as 22.5% increase in clinical stage I, 57% increase in clinical stage II and 75% decline in clinical stage III. The percent increases in clinical II stage indicates improvement from clinical stage III to II. The mean CD4 count has increased from baseline 141 to 359 cells/ mcl after 6 months of ART. The average increase in CD 4 count was 217 cells / mcl. In 50% of the cases, CD4 count increased to 200% and 13% showed 500% increase compared to baseline. 2.7% cases showed decline in CD4 count reflects, immunological failure. In the study by Kilaru KR et al., had immunological success around 80%, 18% had increase in CD4 by more than 200 cells, with a median CD4 increase of 114 cells / mcl. Also in the study by Smith CJ et al., demonstrated a median CD4 increase of 114 cells/ mcl and Immunological success in 84% patients.

CONCLUSION

Stavudine based ART regimen is often preferred to Zidovudine based ART as initial therapy Institution of ART was associated with a favorable clinical response in terms of 20% weight gain, 42% increase in functional status, >50% improvement in clinical staging and high rate of immunological response with mean CD4 count has increased from baseline 141 to 359 cells/ mcl after six months of ART. The Immunological and clinical response to ART in HIV infected TB patients were similar to those of non – TB patients.

REFERENCES:

1. Smith CJ, Sabin CA, Youle MS et al. Factors influencing increases in CD4 cell counts of HIV positive persons receiving long term highly active retroviral therapy. *J Infectious Dis*-2004 Nov.15, 190 (10) ;1860-8.
2. Renaud M, Katlama C, et al. Determinants of paradoxical CD4 cell reconstitution after protease – inhibitor containing antiretroviral regimen. *AIDS* 1999, 13; 669-76.
3. Kaufmann D, Pantaleo G, Sudre P, et al. CD4-cell count in HIV infected adults remaining viremic with HAART. SWISS HIV cohort study. *Lancet* 1998, 351; 723-4.
4. Grabar S, Le Moing V, Goujard C, Lepout C, et al. Clinical outcome of patients with HIV-1 infection according to immunology and virologic response after 6 months of highly active anti-retroviral therapy. *Ann Intern med* 2000, 133:401-10.
5. Guidelines for the use of Antiretroviral agent in HIV-1 Infected adults and Adolescents. Oct. 10,2006-A working group of the office of AIDS research advisory council; (OARAC).
6. Hofer CB, Secheter M, Harrison LH. Effectiveness of Antiretroviral therapy among patients who attend public HIV clinics in Riode Jeniere, Brazil. *J Acquir Immune defic synd*.2004-36:967-71.
7. Hung cheienching , Hsiao chinfu, ChenMaoYuan et al. Improved outcomes of HIV-1 infected adults with Tuberculosis in the era of highly active retroviral therapy . *AIDS*, 2003 vol(17) (no 18) 2615-2622.
8. Kilaru KR, Kumar A, Sippy N, Carter AD. Immunological and virological responses to highly active antiretroviral therapy in a non-clinical trial setting in a developing Caribbean country. *HIV med*, 2006 ; mar-7(2); 99-104.