An the beginning of highly active antiretroviral therapy

Art & Culture

An estimated34. 0 million adults worldwide were living with Human Immunodeficiency Virus(HIV) and of these 2. 5 million were newly infected with the virus and 1. 7 milliondied of HIV/ Acquired Immune Deficiency Syndrome (AIDS) in 20111.

In Sub–Saharan Africa, more than 23. 5 million people were living with HIV, 1. 8million become newly infected and 1.

3 million died of (AIDS) at the end of 20111. In December2013, Ethiopia adopted the new WHO integrated guidelines for treatment, inwhich adults with CD4 below 500, all pregnant women and all TB patientsindependent of CD4 count are eligible for treatment 2. Ethiopia has now reached a symbolic milestone for curbing the spread of theepidemic, where the number of newly started clients on ART (on average 58, 000adults each year) has surpassed the number of new infections in adults. However, patient loss to follow-up and ensuring adherence to ART regimensremain major challenges of the ART programme 2. Treatment failure poses a major concern for HIV programs in resource- limitedsettings where treatment options are limited. At the time ofthe study, the first-line therapy comprised two NRTIs (stavudine/zidovudine andlamivudine/tenofovire) and one NNRTI (nevirapine/efavirenz).

A gradualphase-out of stavudine as a first-line agent was recommended in mid-2010 andstrongly recommend in 2013 WHO guideline due to well-recognized metabolictoxicities 34. ART restores immune function and reduces HIV related adverse outcomes 5. Since the beginning of highly active antiretroviral therapy (HAART) in 2005, there have been dramatic declines in morbidity and mortality due to HIV inEthiopia to reduce epidemics

and improve the quality of life 6. This advantage is eroded when treatment failure develops.

Despite thesignificant reduction in morbidity and mortality among the HIV-infectedpatients receiving combination ART, a considerable number of patients fail toachieve a sustained virological and immunologic response to therapy 7. Delayed detection of treatment failure may increase drug toxicity, may lead tothe accumulation of drug resistance- associated mutations, and may result inincreased morbidity and mortality in the population at large 7. Treatmentfailure can be defined as progression of disease after initiation of HAART. Failure can be assessed by clinical (recurrence or WHO stage III/IV)immunologic (a decline in CD4 count), or virologic (a viral rebound above a setthreshold of 1000 copies/ml) criteria 3. A studyconducted in East Africa reported thathigh prevalence of treatment failure (24. 6%) and associated factors wereyounger age and unsatisfactory adherence 4. Other studies from Tanzania, Uganda andZambia were reported different results as HIV RNA at least 1000 copies/ml from7. 2 to 17.

2% across study sites (mean = 9. 9%). Factors significantly related toincomplete adherence included visiting a traditional healer, screening positivefor alcohol abuse, experiencing more HIV symptoms, having an ART regimenwithout nevirapine and greater levels of internalized stigma 8.

Identification of risk factors helps to define early predictors of treatmentefficacy that permit better use of these potent drugs, avoid unnecessary sideeffects of second-line drug, prevent drug resistance, and decrease economicburden, especially in a resource-limited setting like

Ethiopia due to theexpensiveness of the second-line drug. It will also help as a guide for healthprofessionals and higher officials to alleviate the problem and to developstrategies to decrease the rate of treatment failureThe objective ofthis study was to determine the prevalence of first-line ART failure and toidentify those risk factors that contribute to treatment failure in theEthiopian HIV patients.