ISSN: 2322-0066

Research and Reviews: Journal of Biology

Adverse Effects and Regimen Switch on Antiretroviral Treatment

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Commentary

Received: 05/05/2015
Revised: 11/05/2015
Accepted: 18/05/2015

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Anti retroviral therapy or combination therapy is commonly used for the management of chronic diseases such as HIV. The word itself indicates treatment associated with immune system. Diseases such as HIV, which effects directly immune system and thus individual will be more susceptible to prone other diseases [1,2]. Children under 15 years of age account for approximately 3.4 million of the people living with human immune virus (HIV)/acquired immune deficiency syndrome (AIDS) worldwide, and almost 90% of all HIV infected children live in sub-Saharan Africa, including Ethiopia, according to the latest estimates from the Joint United Nations Programme on HIV/AIDS (UNAIDS) [3,4]. HIV is caused by human immunodeficiency virus and since the evidence the disease was more prone in Ethiopia and it was found that 2.4% in which most of the burden occurring among younger age groups [5-7]. Tuberculosis is one of the common complaints among patients with HIV as the disease will be affected easily in patients with immune deficiency [7-9]. The main aim of developing ART is to reduce the risk of ADRs and individuals resistance for use of drugs for long period.

HIV has created an extensive challenge for the scientists since the recognition of the disease as the treatment is always a question mark [6].

However, the use of ART does not assure the complete prevention of ADRS but the can be with certain common side effects which effect GI system and CNS [10,11]. The main reason behind switch on therapy is intolerance to the SE associated with and this may leads to either discontinuation of the therapy or switch on therapy. Interaction of antiretroviral therapy with treatment of TB reducing the efficacy of retroviral therapy and increasing the risk of drug toxicity leading to further severe ADRs [12].

Survival rates in patients with human immunodeficiency virus (HIV) infection are improved with early treatment; therefore, current recommendations are to begin antiretroviral therapy (ART) in patients with a CD4 cell count of 500 per mm3 (0.50 × 109 per L) or less1–4. Because of this new threshold, family physicians can expect to see patients with HIV infection who have been taking ART for longer lengths of time[13]. Pill counts and frequency of dosing have decreased to one to three pills per day for usual starting regimens. Despite this, ART regimens continue to have significant adverse effects that require monitoring for drug interactions and long-term morbidity related to cardiovascular, bone, and kidney disease[14-17].

ART side effects

1. Appetite Loss

2. Diarrhea
3. Fatigue
4. Mood Changes, Depression, Anxiety
5. Nausea and Vomiting
6. Rash
7. Trouble sleeping

Switching from a simple yet effective ARV regimen to a fresh regimen have to be accomplished carefully and only when the possible benefits of the change outweigh the particular possible complications regarding altering the treatment[18]. The primary basic principle regimen switching is to maintain viral suppression. Following to be considered while switching the therapy:

- the patient's medical and complete ARV history including prior virologic responses to ART;
- resistance test results;
- viral tropism (when maraviroc [MVC] is being considered);
- HLA B*5701 status (when ABC is being considered);
- co-morbidities;
- adherence history;
- prior intolerances to any medications; and
- concomitant medications and supplements and their potential for drug interactions with ARVs.

However, patient's acceptance on new therapy must be assessed as cost of the treatment is also one of the factors to be considered[19]. Consequently, concurrent with ascribing a certain clinical event to be able to ART WORK, alternate causes for the event should be investigated[20,21]. Regarding some sort of significant adverse event, it may be necessary to discontinue or switch ARVs pending the outcome of such an investigation. For the first few months, the individual ought to be carefully monitored for any new adverse effect. Patient's viral load also need to be monitored to assure continued viral suppression[22-25].

In the present article, authors were clearly explained the chances, risks and the treatment alternatives associated with ART and chronic diseases. The demographic studies of the patients were well described but the study records may vary with many drawbacks like the time period, patient history, TDM etc. The study was very interesting and a novel approach as ADRS are common with many of the drugs and the present study and the author's contribution will give a clear picture for further approaches. For diseases such as HIV, where complete cure cannot be possible, authors had done a good attempt in making the ADRs transparent and this may aid for upcoming scientists a novel way of drug discovery.

However, as mentioned the study had come up with certain limitations that the recording and reporting of the effects which authors were fare enough to agree which is highly appreciable. ART can always be an option for management of drug toxicities but cannot be a complete cure. Therapeutic drug monitoring may not be feasible in resource limited setting; therefore health providers working in the ART clinic should monitor patients both clinically and with laboratory for the occurrence of side effects. Particularly patients on ZDV, NVP and those on concomitant medication need close follow up. The health system should develop ADR database so as to easily record and report adverse effect.

CONCLUSION

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