ISSN: 2638-1958

Madridge Journal of AIDS

Case Report

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Single-Tablet Regimen containing Elvitegravir in an HIV-2 Infected Patient

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Article Info

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Received: January 15, 2019
Accepted: February 27, 2019
Published: March 8, 2019

Citation: Correia de Abreu R, Duarte F, Neves I. Single-Tablet Regimen containing Elvitegravir in an HIV-2 Infected Patient. *Madridge J AIDS.* 2019; 3(1): 60-61. doi: 10.18689/mja-1000110

Published by Madridge Publishers

Abstract

Therapeutic armory for HIV-2 infected patients is limited when compared to the one available to HIV-1. Evidence on the use of integrase inhibitors for HIV-2 is still narrow outside clinical trials. The authors present a case report showing the success of a single-tabled regimen containing elvitegravir in an HIV-2 infected patient.

Keywords: HIV-2; Single-tablet regimen; Elvitegravir/cobicistat; Efficacy; Pregnancy.

Introduction

HIV-2 was first identified in 1986 in West African patients at Institute Pasteur [1]. Initially typed as non-HIV-1, it shows very similar biological and morphological properties to HIV-1 but presents itself with different antigens and envelope-glycoproteins, making it more closely related to the simian virus. HIV-2 has always been a challenge to treat due to a limited set of drugs and to follow-up, as a result of a lack of correlation between viral load, immunological status and clinical evolution.

The largest HIV-2 cohorts outside Africa are located in the Mediterranean countries like Portugal, Spain, France and Italy even tough with small samples of patients. In the medical literature, real-world examples of the use of integrase inhibitors in HIV-2 patients are scarce and are limited to some clinical trials [2,3]. Most studies show clear efficacy of raltegravir in these patients, but the examples described with the use of elvitegravir or dolutegravir are still rare, both of which offer the possibility of single-tablet regimens [3-6].

Case Report

The authors describe the case of a 22-year-old woman from Guinea-Bissau living in Portugal since June 2014. She was referred to the Infectious Diseases Department in August of the same year after the diagnosis of HIV infection in the context of a pregnancy that was then voluntarily discontinued. Blood tests showed CD4+ T-cell count of 109/mL, positive Western Blot for HIV-1 and 2, HIV-2 RNA of 2780 copies/mL, (RT-PCR test-negative for HIV-1). Other blood tests showed a normal blood count, renal and liver function, slight increase in total cholesterol (205 mg/dL), remaining negative viral serologies as well as VDRL and TPHA.

On October 2014 she was started on tenofovir disoproxil fumarate/emtricitabine (300/200 mg once daily) plus raltegravir (400 mg twice daily) and trimetoprim/sulfametoxazol (960 mg every alternate day) for opportunistic infections (OIs) prophylaxis. Clinically she showed a gradual rise in CD4+ T cells and a sustained virological suppression over time.

In September 2015 the patient showed some compliance issues focusing on the prescription schedule due to a delicate family situation. For fear of non-compliance with

consequent immune repercussion, viral rebound and/or acquisition of viral resistance, she was switched to a single-tablet regimen with tenofovir disoproxil fumarate/emtricitabine/elvitegravir/cobicistat (300/200/150/150 mg once daily). Since then, the patient showed a good compliance, a sustained immunological recovery (being able to stop OIs prophylaxis) and persistent virological suppression.

In September 2017 the patient became pregnant and during this period the therapeutic regimen was maintained without virological failures or side effects. Delivery was by cesarean section without intercurrences and HIV-2 infection in the child was excluded after regular monitoring as suggested by the international guidelines.

In November 2018 the patient was switched to tenofovir alafenamide/emtricitabine/elvitegravir/cobicistat (10/200/150/150 mg once daily) maintaining a good compliance, sustained immunological recovery and virological suppression.

Discussion and Conclusion

This case allows us to explore an important issue in pharmacological armory approved so far for HIV-2 infected patients. Data on the use of integrase inhibitors for HIV-2 infection is limited and little ongoing research on new drugs for HIV-2 exist [2,3]. The existence of single tablet regimen including an integrase inhibitor with demonstrated efficacy in HIV-2, may be another useful weapon to help overcome issues of poor adherence, reducing the risk of virological failure and acquisition of resistance [5,6]. Although this is a unique case, it allows us to verify that the option of using elvitegravir in a single-tablet regimen in HIV-2 patients, even during pregnancy, is effective in immunological recovery and viral suppression, as well as in the absence of effects adverse effects.

Conflicts of Interest

None of the authors have conflicts of interest.

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