Nevirapine Induced Steven Johnson Syndrome

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Abstract:
Objective: To report a case of Nevirapine induced Steven Johnson syndrome in an individual with Acquired Immuno Deficiency Syndrome.

Methods: A 25 year old HIV infected female patient came to ART unit of MGM Medical College, Jamshedpur with complaints of intermittent high grade fever and papulovesicular eruption all over the body with abrasion of oral mucosa on 3rd day which gradually increased in size along with eyes and vaginal mucosa involvement consistent with Steven Johnson syndrome. Drug history revealed that she was being treated with Highly Active Antiretroviral Therapy which included Nevirapine, Lamivudine and Stavudine. On examination her vital signs were normal and blood report within normal limit.

Result: Her condition got improved with stoppage of Nevirapine and by putting her on prednisolone which lead to her full recovery. So we attributed this adverse drug reaction to nevirapine.

Conclusion: A strict vigilance is required by the physician in Anti retroviral therapy unit of every hospital while initiating Nevirapine combination therapy or think of other drug alternative to Nevirapine.

Keywords: Steven Johnson syndrome, Nevirapine, Anti retroviral therapy, Highly Active Anti retroviral therapy

I. Introduction

Steven Johnson syndrome is a very rare disorder with incidence rate of 0.05 to 2 person per million populations per year of which drugs are most commonly implicated in 95% of cases¹. SJS is a life threatening skin condition that usually require hospitalization and is characterized by cell death which causes the epidermis to separate from the dermis. SJS occur more often in men than in women and usually affect young adult under 30 years of age². SJS usually begin with fever, sore throat and fatigue which is commonly misdiagnosed and therefore treated with antibiotics and which later present with mucocutaneous manifestation of painful rashes, blisters, peeling or in form of small bumps. Although SJS can also be caused by infections, they are most often adverse effect of medications such as lamotrigine, sulfonamide, allopurinol, nevirapine, tetracycline etc. Nevirapine induced Steven Johnson syndrome is relatively a rare condition and extensive web based search revealed < 10 cases has been reported. We report here a rare case of nevirapine induced SJS successfully managed by withdrawal of nevirapine and administration of steroid.

II. Case Report

A 25 year old female a known case of Human immunodeficiency virus (HIV) infection since September 2010 was initiated with anti retroviral therapy (ART) of

2. Zidovudine+ Lamivudine + Efavirez from 20/1/2011 to 13/7/2015
3. Tenofovir + Lamivudine + Efavirez from 17/7/2015 to 13/9/2015
4. Nevirapine + Lamivudine + Stavudine from 14/9/2015 to till occurrence of SJS

On 25/9/2015 Nevirapine was started as 200 mg oral dose twice daily on 14/9/2015 along with lamivudine 150 mg BD and stavudine 30 mg BD oral, 12 days later she presented with complaint of intermittent high grade fever along with papulovesicular eruption all over the body with abrasion of oral mucosa on 3rd day which gradually increased in size and involved oral mucosa, eyes and vaginal mucosa consistent with Steven Johnson syndrome. On examination her vital parameter were normal and her blood report showed Hb =11.4%, TLC = 6400 /mm3, DLC = P62 L34, random blood sugar =96mg, urea =42 mg, creatinine=1mg, serum bilirubin =0.6 mg, protein 7.43 (albumin =4.48+ globulin =2.98 ), ALT =24, ALP =162, GGT =15.8 unit. Her condition was managed by stopping nevirapine immediately and by putting her on prednisolone 60 mg along with other supportive measure. Patient general condition started recovering after 5 days and skin and mucosal lesion satisfactorily subsided after 10 days.

III. Discussion
Nevirapinotoxicity has became an emerging issue in the management of HIV-infected patients. The common adverse drug reactions (ADRs) observed with Nevirapine include skin rashes and hepatic toxicity. However, skin rashes are usually mild to progressively Stevens-Johnson syndrome or toxic epidermal necrolysis in 0.5-1% cases. It has been reported that SJS or TEN occurs within 4-6 weeks of Nevirapine treatment, but not in 12 weeks. Thus, it seems that in our case study the first exposure lead to prior sensitization that lead to serious mucocutaneous reaction on 2nd exposure. SJS effect was seen with acne, skin lesions are erythematous macules that rapidly develop central necrosis. Although our patient was not re-challenged with Nevirapine, the signs and symptoms of this patient were most consistent with Nevirapine-induced SJS. There is no evidence on lamivudine and efavirenz-induced TEN or SJS. The causality assessment of SJS with Nevirapine using Naranjo's Causality Assessment Scale showed a score of 4, showing that it is possibly an ADR.

IV. Conclusion

It was found that Nevirapine can induce Stevens Johnson Syndrome in a patient with HIV infection within 2 weeks. So physicians should consider this fact before prescribing HAART while treating HIV patients. The risk of severe mucocutaneous adverse reactions associated with Nevirapine in HIV-1 infected people appears to be among the highest reported. Although initiating therapy with a low dose of Nevirapine followed by 200 mg twice daily may reduce the overall risk of rash, with the increasing use of Nevirapine, the incidence of SJS among patients infected with the HIV-1 virus is likely to increase, which is the major challenge for HIV-1-infected individuals and for their treating physicians. It would be unfortunate to limit treatment options suddenly for patients because inadequate information was available on which to make a treatment decision. We hope that our findings will help the physician for good health outcomes in future.

References