Nevirapine-induced Stevens-Johnson syndrome from a tertiary care hospital in Central India

Vandana Badar, Swapnil Deshmukh*, Dharmendra Mishra, Sangita Chaudhari

INTRODUCTION

Nevirapine, an antiretroviral non-nucleoside reverse transcriptase inhibitor (NNRTI), directly inhibit HIV reverse transcriptase without intracellular phosphorylation. Rash are the most common adverse effect followed by nausea and headache. Fever and rise in transaminase occur dose dependently and is potentially hepatotoxic.

Occasionally skin rashes caused by nevirapine are very severe. Among NNRTIs nevirapine, delavirdine there is a high frequency of rash associated with administration. With nevirapine this is often a generalized maculopapular erythematous reaction which is generalized usually sparing palms and soles.

CASE REPORT

A 42 year old male patient, a known case of AIDS, with CD4 count of 190 cells/mm³ receiving antiretroviral therapy (ART) consisting of stavudine 150 mg, lamivudine 150 mg, and nevirapine 150 mg since 4 weeks, was referred from ART center to medicine OPD with complains of rashes all over the body and fever since 8 days. The patient presented with erythematous rash all over the body, which progressed to blisters within 2 days. There were multiple red, macular lesions of skin and erosions of buccal and anal mucosa with conjunctivitis.

On investigation, urine albumin and sugar were normal. On liver function test examination, serum glutamate oxaloacetate transaminase (SGOT:81.4IU) and serum glutamate pyruvate transaminase (SGPT:61.7IU) were raised. Serum total proteins (8.8 g%) and serum albumin (4.14 g%) were normal. Serum bilirubin indirect were 0.38 mg%, direct were 0.11 mg%. No other organs were involved. A diagnosis of Steven-Johnson syndrome (SJS) was made excluding other opportunistic infections and differential diagnosis.

The patient was referred to skin wards from medicine OPD. Patient was treated with methylprednisolone 16 mg IBD and then in tapering doses during the course of the disease.

ABSTRACT

A 42 year old man, a known case of AIDS receiving antiretroviral therapy – stavudine, lamivudine, and nevirapine since 4 weeks, was admitted with erythematous rash, with blisters, and abnormal liver function test. A diagnosis of Steven-Johnson syndrome was made excluding other opportunistic infection and differential diagnosis.

Nevirapine was discontinued until the patient recovered. After recovery patient was started with stavudine, lamivudine, and efavirenz treatment without re-challenge with nevirapine.
for 3 days. Patient was given azithromycin, topical steroid triamcinolone acetate cream, betamethasone lotion, anti-allergic, and prompt discontinuation of nevirapine. The rash lasted for 7 days, and then slowly faded. The patient was continued with topical steroids, stavudine, lamivudine, without re-challenge with nevirapine. Efavirenz was included instead of nevirapine.

DISCUSSION

Over the past 35 years, HIV infection has emerged as a major global health problem. Though with the use of effective ART, the prevalence is declining in the present century. WHO estimates in 2009 showed that 33.3 million people infected with HIV and AIDS killed 1.8 million people in 2010.

We described a case of SJS caused by nevirapine, a NNRTI for HIV therapy. It frequently causes adverse cutaneous events: rash (32-48%) with 2-6 weeks after starting therapy; severe cutaneous reaction (8% grade 3-4 of WHO scale and SJS (0.3-1%). Severe rashes have been observed in 3% of patients taking nevirapine in clinical trials, 85% of whom were men. A hypersensitivity is well recorded.

Nevirapine is the leading cause of SJS and TEN related to AIDS in Europe. In AIDS patient combination therapy is commonly preferred (stavudine + lamivudine + nevirapine). There are many references showing nevirapine is the most common drug responsible for severe cutaneous adverse drug reaction. Nevirapine was stopped and the patient was treated with steroids, antibiotics and anti-allergics. When the lesions were resolved completely, once again the patient was started with ART but nevirapine was replaced with efavirenz (stavudine + lamivudine + efavirenz) and discharged from hospital. Re-challenge was not done with nevirapine. SJS or TEN has been reported to occur in 0.3% of the patients taking nevirapine within first 4-6 weeks of treatment. Patients infected with HIV are at increased risk of developing severe cutaneous or mucocutaneous drug reactions. The identification of single drug as the cause of a drug eruption is difficult because antiretroviral agents are not used in monotherapy and are often associated with many other drugs, such as antibiotics. In this patient, SGOT and SGPT were raised owing to nevirapine as other risk factors like CD4 >250 mm³ was present. In the present case, the patient was administered stavudine 300 mg and lamivudine 150 mg both of which have no association with SJS. WHO-Uppsala Monitoring Center causality assessment criteria indicated a probable association with nevirapine. A strict vigilance should be kept for patient receiving ART for first 2 months and dose of nevirapine should be gradually increased 200 mg OD for 2 weeks and then 200 mg BD to avoid long-term ADRs.

CONCLUSION

Given the association between HIV infection and a hypersensitivity reaction, all patients who developed SJS should be screened for HIV.

Funding: No funding sources
Conflict of interest: None declared
Ethical approval: Not required

REFERENCES
