EXCELLENT PUBLISHERS

International Journal of Current Research and Academic Review

ISSN: 2347-3215 Volume 3 Number 2 (February-2015) pp. 156-158

www.ijcrar.com

Nevirapine induced Stevens-Johnson syndrome

Vijaykumar Lakshman Lamani*, Basavaraj C Kotinatot and Aruna Bhushan

Department of Pharmacology, Belgaum Institute of Medical Scienes, Belgaum, Karnataka, India

Corresponding author

KEYWORDS

Nevirapine, HIV, adverse drug reaction, Stevens Johnson syndrome

A B S T R A C T

Nevirapine, a non-nucleoside reverse transcriptase inhibitor (NNRI).Nevirapine based regimens are commonly used Highly Active Antiretroviral Therapy (HAART) regimens for the treatment of HIV infection in National Aids Control Organization. There is persistence of a high risk of Stevens Johnson syndrome (SJS) or Toxic Epidermal Necrolysis (TEN) in relation to HIV infection associated with exposure to Nevirapine. We report a case of Steven Johnson syndrome in HIV positive 37 year female patient on Nevirapine (NVP) based HAART regimen.

Introduction

Stevens - Johnson syndrome (SJS) is a variant of Erythema multiforme is an immune complex hypersensitivity reaction that can be caused by many factors such as infections, drugs and malignancies characterized by an extensive detachment of epidermis and erosions of mucous membranes. Nevirapine is commonly associated with skin reactions such as SJS, fever and rise in transaminases**.** Adverse drug effects occur frequently, enough to be a public health concern. We report a case of Stevens-Johnson syndrome due to nevirapine based HAART regimen.

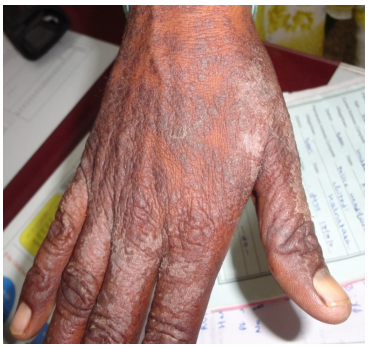
Case Report

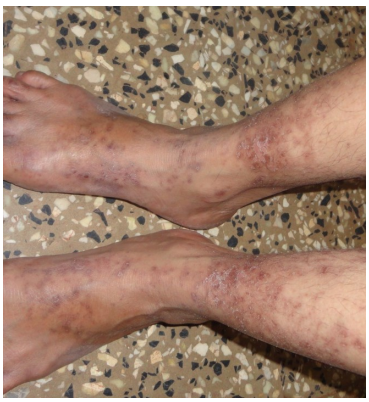
HIV positive diagnosed 37 years old female on Nevirapine 200mg + Lamivudine 150 mg+ Zidovudine 300mg twice daily since one month presented with generalized papule follicular eruption associated with gradually progressive weakness, fever, itchy rashes over face, arms and hands. On examination multiple erythematous papules, plaques, target lesion located over her hands, palms, conjunctiva, oral cavity and genital mucosa.

The laboratory findings are Hb 8.3 gm%, total count 4300/mm^3 with 65% neutrophils, 30% lymphocytes, 0.4% eosinophils, 0.1% monocytes. Total protein level was 6.9gm/dl, albumin 3.2 gm/dl, alanine aminotransferase 33.6(10-35 U/L) and amino transferase level was 37.4(10-40 U/L). Stevens Johnson syndrome (SJS) was diagnosed based on her clinical presentation

and laboratory findings by dermatologist. Nevirapine (NVP) 200 mg + Lamivudine (3TC) 150 mg + Zidovudine(AZT) 300 mg stopped then patient was treated with Dexamethasone 8 mg OD, i.v fluids ,prophylactic antibiotic Cefotaxime 1gm BD, topical treatment with Betamethasone cream, anti allergic drugs like citrizine 10 mg OD, Chlor hexidine mouth wash was given, adverse drug event was documented on CDSCO (central drug standard control organization) ADR(adverse drug reaction) report form, however rechallenge was not carried out due to ethical constraints and causality assessment was done. Report sent to PvPI NCC (Pharmacovigilance Programme of India National Coordinating Centre). After 10 days of treatment of SJS she completely recovered, there was complete resolution of all symptoms. HAART regimen was restarted with Efavirenz by replacing Nevirapine.

Photos for Stevens - Johnson syndrome (SJS)





Discussion

Nevirapine is a non-nucleoside HIV-1 reverse transcriptase inhibitor widely prescribed for HIV exposed individuals as part HAART regimens because of its efficacy and tolerability.

Antiretroviral toxicity is an increasingly important issue in the management of HIV-infected s case, we encountered Nevirapine induced Stevens Johnsons Syndrome. The common adverse drug reactions (ADRs) observed with nevirapine includes skin rashes and hepatotoxicity. However, skin rashes are usually mild may progress to Stevens-Johnson syndrome or toxic epidermal necrolysis in 0.5-1% cases.[1] It has been reported that SJS or TEN occurs within 4-6 weeks of Nevirapine treatment.[2] In our study it occurred within 2 weeks of treatment. The infiltrate arounmechanisms probably involve drug-specific cytotoxic Lymphocytes.[3]

The major pathologic change observed in SJS is an acute lymphohistiocytic inflammatory d blood vessels and degenerative changes in the endothelial cells of capillaries.

Manifestation of hepatic toxicity may range from reversible mild to moderate elevation in Liver enzymes [4] to fulminate hepatic failure[5] but in our study it was observed that liver enzymes level was within normal range. Though rash associated hepatotoxicity in Nevirapine treated patient is not an entirely uncommon occurrence. The extreme presentation of both SJS and Fulminate hepatic failure in combination has been rarely been reported in the literature.[6]

SJS effects all ages and both gender, skin lesions are erythematous macules that rapidly develop central necrosis with

papules, bullae and denudation on the face, trunk and extremities. Mucosal erosions typically occur in at least two sites on conjunctivae, mucous membranes of the nares, mouth, anorectal juctions, vulvovaginal and urethral meatus. Other clinical features include pneumonitis, productive cough, fever, headache and malaise.[2]

In this present case, the other concomitant medications patient was receiving were Zidovudine 300mg and Lamivudine 150mg twice daily. Both these drug does not have an obvious association with SJS,[7] and since the sign and symptom of this patient were most consist with SJS, so we believed that Nevirapine was the causative factors for SJS. The causality assessment was done using Naranjo's causality scale to determine a causal relationship between Nevirapine and SJS showed a score of +7 and assigned as "probable" association.

SJS is an acute, self-limited disease, with high morbidity, potentially life-threatening. Mortality rates are 5%. Treatment of SJS is primarily involves supportive and symptomatic treatment.

Conclusion

Although current antiretroviral regimens are potent from an antiviral perspective, they often fail because of patient non adherence. In this context our case report may caution clinicians to keep SJS in mind while initiating Nevirapine based HAART regimen.

References

1. Aronson JK. Meyler's side-effects of drugs. 15th ed. Vol 4. The Netherlands: Elsevier. 2006. p. 2498-502.
2. Metry DW, Lahart CJ, Farmer KL, et al. Stevens-Johnson syndrome caused by the anti retroviral Drug nevirapine. J Am Acad Dermatol. 2001;44:354-57.
3. Fagot JP, Mockenhaupt M, Bouwes-Bavinck JN, et al. Nevirapine and the risk of Stevens-Johnson syndrome or toxic epidermal necrolysis. AIDS. 2001 Sep 28;15(14):1843-48.
4. Prakash M, Poreddy V, Tiyyagura L, Bonacini M. Jaundice and hepatocellular damage associated with Nevirapine therapy. Am J Gastroentrol. 2001;96:1571-74.
5. Buyse S, Vibert E, Sebagh M. Liver transplantation for fulminant hepatitis related to nevirapine therapy. Liver Transpl. 2006;12:1880-82.
6. Claes P, Wintzen M, Allard S, Simons P, et al. Nevirapine-induced toxic epidermal necrolysis and toxic hepatitis treated successfully with a combination of intravenous immunoglobulins and N-acetylcysteine. Eur J Intern Med. 2004 Jul;15(4):255-58.
7. Singh H, Kachhap VK, Kumar BN, et al. Nevirapine induced Stevens-Johnson syndrome in an HIV infected patient. Indian J Pharmacol. 2011 Feb;43(1):84-6.