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NevirapineInduced 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 complains 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:*StevenJohnson 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 cases[1] . 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 age[2] . SJS usually begin with fever , sore throat and fatigue which is commonly misdiagnosed and therefore treated with antibiotics and which later present with muco-cutaneous 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 withdrawl 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

1. Nevirapine + Zidovudine + Lamivudine from 16/9/2010 to 29/10/2010 .
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 occurance 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 papulo vesicular 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 nervirapine 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

Nevirapinetoxicityhas became an emergingissueinthemanagementofHIV- infected case by HAART regimen .The commonadversedrugreactions(ADRs) observedwithnevirapineincludesskin rashesandhepatotoxicity.However,skin rashesareusuallymildmayprogressto Stevens-Johnsonsyndrome ortoxic epidermalnecrolysisin0.5-1%cases[3].Ithas been reported that SJS or TEN occurs within 4-6weeksofNevirapinetreatmentbutinour studyitoccurredwithin2week i.e in 12 days also it seems that in our case study the first exposure lead to prior sensitization that lead to serious muco cutaneous reaction on 2nd exposure . SJSeffectsallagesandbothgender,skin lesions are erythematous macules that rapidly develop central necrosis .Although our patient was not re-challenged withnevirapine,thesignsandsymptomsofthispatientweremostconsistentwithnevirapineinducedSJS. There is no evidenceonlamivudineandefavirenz-induced TEN or SJS.ThecausalityassessmentofSJSwithnevirapineusingNaranjo'sCausalityAssessmentScale[4]showedascoreof four showing that it is possibly ADR .

IV. Conclusion

It was found that Nevirapinecan induce Stevens Johnson Syndrome in a patient withHIV infection within 2 week . So physicians should consider this fact before prescribing HAART while treating HIV patients . TheriskofseveremucocutaneousadversereactionsassociatedwithnevirapineinHIV-1 infectedpeopleappearstobe amongthehighest reported.Althoughinitiating therapy with a low doseof200 mgperdayfollowedby200mgtwiceadaymayreducetheoverallriskofrash,withtheincreasinguseof nevirapinetheincidenceofSJSamongpatientsinfected withtheHIV-1virus islikelytoincreasewhichisthemajor challengeforHIV-1-infectedindividualsandfortheir treatingphysicians,itwouldbeunfortunatetolimit treatmentoptionsundulyforpatients because inadequateinformationwasavailableuponwhichto makeatreatmentdecision.Wehopethatourfindingswill help the physician forgoodhealthoutcomes infuture.

Photograph showing Nevirapine induced Steven Johnson Syndrome

Refrences

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