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NEVIRAPINE INDUCED EXFOLIATIVE DERMATITIS: A CASE REPORT

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ABSTRACT

Nevirapine is a nonnucleoside reverse transcriptase inhibitor (NNRTI) used one of the first – line drug for the highly active anti-retroviral therapy (HAART) in human immunodeficiency virus positive patients. The most frequent adverse events associated with nevirapine are rash, purities to fulminant hepatotoxicity. The skin rashes are usually mild and occur in initial 4-6 weeks of starting the therapy, indicating a need for close monitoring and follow-up of the patient in first few weeks. We hereby, present a case of 46 year old male who developed exfoliative dermatitis after 4 week of therapy.

KEYWORDS: Nevirapine, Rash, Exfoliative Dermatitis, Pruritus, Hepatotoxicity.

INTRODUCTION

Highly active anti-retroviral therapy has been shown significantly to reduce HIV related hospitalizations and mortality in both clinical trials and a number of large observational studies.[1]The first line treatment of HIV mostly consists of three drugs, two nucleoside reverse transcriptase inhibitors (NRTIs) as backbone i.e. zidovudine + lamivudine along with a non-nucleoside reverse transcriptase enzyme inhibitor(NNRTI) i.e. nevirapine (NVP) because of convenient dosing, lower pill burden and good tolerance.[2] Nevirapine is approved for the treatment of HIV infection in adults & children as part of a combination therapy.[3] The most frequent adverse drug event associated with NVP includes skin rash and hepatotoxicity.[4] These skin reactions start within the first 6 weeks of therapy.[5] Incidence of severe form of skin rash is 0.5-2% cases [6] with nevirapine use, the occurrence of exfoliative dermatitis also known as erythroderma. Here, I have reported a cause of exfoliative dermatitis in HIV patient who is on HAART.

CASE REPORT

A 46 year old male patient was diagnosed to be IDV+ and was put on ART including zidovudine 300mg, lamivudine 150mg, nevirapine 200mg. Neverapine was advised once daily for the first two weeks and twice daily thereafter. After 4 weeks of treatment patient noticed itchy skin lesions over whole body. History of fever was present, which is associated with chills and also has a complaint of decreased appetite. The family and personal history was un-remarkable.

After 2-3 days, patient noticed fine white scaling of the skin over hands and then spreading to whole body. On detailed examination, diffuse exfoliative erythematous intensely pruritic patches were present involving more than 80% of the body surface area, more severe on the legs [fig: 1]. The conjunctiva skin over the scalp and genitalia were spared. Exfoliative dermatitis may be seen with drugs like carbamazepine, allopurinol, nevirapine, and gold.

So, the patient condition was diagnosed by consultant dermatologist as drug induced exfoliative dermatitis by suspecting nevirapine as the causative agent. Investigations revealed HIV reactive, HB level as 10.0 gm/dl, CD_4 count 174 cells/cc, Blood count, Random blood sugar, Chest X-ray, Liver and renal function tests are normal.

The treatment was dependent on the cause. ART was withdrawn and the patient was treated for two weeks with Tab. Prednisolone 40mg, Tab. Pantoprazole 40mg, liquid paraffin + glycerine lotion. The patient showed significant improvement at the end of two weeks and was discharged after starting him on a newly (HAART) regimen Zidovudine 300mg, Lamivudine 150mg and Efavirenz 600mg once daily. In subsequent follow-up for next 30 days the patient showed gradual and complete resolution of skin lesions, there was no new lesion. The patient tolerated the new HAART regimen well and was advised to check CD_4 counts regularly and advised follow-up.

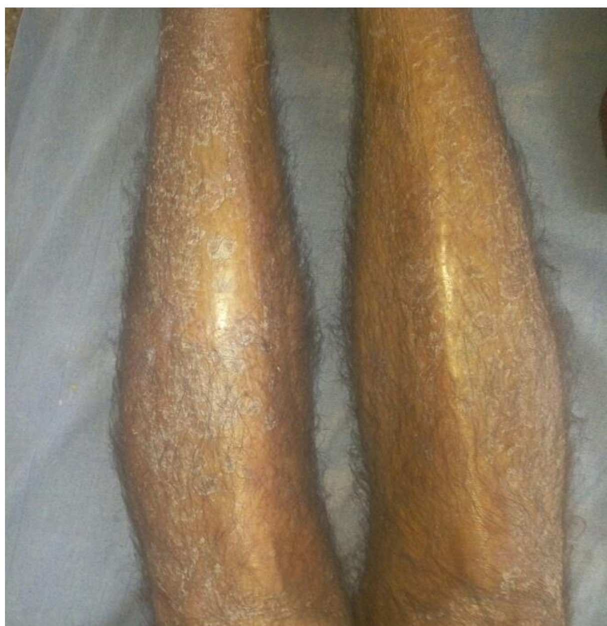

Fig. 1: Exfoliative dermatitis due to usage of Nevirapine.

DISCUSSION

Nevirapine is used in combination with other antiretroviral agents, skin rash is the most common adverse reaction associated with NVP which is usually appearing within the first 4-6 weeks of therapy.[1, 2] Nevirapine is initiated with a starting dose of 200mg every day for first 2 weeks then the dose should be increased to 200 mg two times a day.[7] The incidence of rash was 38% with NVP once daily, 21% with NVP twice daily.[8] Severe and fatal hepatitis frequently seen in women with CD_4 counts greater than 250cells/mm^3 especially during pregnancy. Nevirapine induces cytochrome P450 3A4, resulting in decreased concentration of oral contraceptives, Efavirenz, and Ketaconazole so, these combinations should be avoided. The adverse reaction is not dose –dependent can be labelled as a type – (B) bizarre class of adverse effect and considered as probable as per WHO scale of causality assessment. Corticosteroids have been used to treat such symptoms include skin rash but worsening of symptoms can occur so NVP should be stopped if the rash is severe.[7]

In this case Nevirapine was replaced with Efavirenze; the patient tolerated the modified HAART regimen without showing any adverse reaction for next 30 days clearly suggested to be continued.

CONCLUSION

Exfoliative dermatitis is a widespread erythema and scaling of the skin. This is usually an extension of a sever drug induced exanthema. These reactions are found to be associated with human leukocyte antigen B*3505 allele.

To minimize ADR or their consequences a clinician should always start NVP in lead-in dose and closely monitor patients especially during the first initial months of therapy. It is our contention that the use of high risk drugs should be carefully monitored for adverse reaction and awareness should be created in patients by treating physicians or Pharmacist. Therefore, it improves patient quality of life which may decrease morbidity, and mortality.

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