

## Case Report,

# Nevirapine Associated Stevens Johnson Syndrome in an HIV Positive Pregnant Woman- A Case for Pharmacovigilance.

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## Abstract:

This is a case report of a 41 year old multipara with human immunodeficiency virus (HIV) infection with an interesting history. She was initially commenced on a regimen of antiretroviral which included nevirapine in her non pregnant state. A change of drugs to replace nevirapine with efavirenz was instituted when skin rash was noticed. Unfortunately, she was recommenced on nevirapine when she became pregnant at 15 weeks gestation and developed symptoms of Stevens Johnson syndrome necessitating admission and treatment following which she made a full recovery. The presentation of this case highlights the importance of pharmacovigilance and health education to patients about adverse drug reactions.

**Keywords:** Nevirapine, Stevens Johnson Syndrome, Human immunodeficiency virus, pharmacovigilance.

## Introduction:

Stevens Johnson syndrome is an immune complex mediated hypersensitivity complex that involves skin and mucous membranes <sup>(1)</sup>. It is a serious systemic disorder with potential for severe morbidity and mortality <sup>(2)</sup>, the mortality rate among patients is 23% at six weeks and 34% at one year <sup>(3)</sup>. Aetiologic agents implicated in Stevens Johnson syndrome include drugs, infections, malignancy related and idiopathic <sup>(2, 4, 5)</sup>.

There are increasing reports of Steven Johnson syndrome among HIV positive pregnant women with nevirapine being implicated in the aetiology <sup>(6, 7)</sup>. We present a case report highlighting pitfalls in the prescription of nevirapine, the morbidity of this condition and the potential for the under-reporting of such occurrences.

## Case history and examination:

Mrs V.a.d. Was a 41 year old g 7 p 5 <sup>+1</sup> known HIV positive client with 5 living children. She had been diagnosed with HIV four years earlier, with a cd4 count of 69 cells per ml and commenced on haart. Initially, she was commenced on truvada

(emtricitabine 200mg and tenofovir disopropryl fumarate 300mg) and nevirapine but later, nevirapine was replaced with efavirenz when she developed a mild skin rash with the use of nevirapine. She was also on daily co-trimoxazole and was doing well. She presented to the adult retroviral treatment clinic at 15 weeks gestation on the 7<sup>th</sup> of may 2013 with a one week history of itchy skin rash which initially started on the neck but progressed to form blisters, eventually rupturing leaving ulcers on the face, trunk, both upper and lower limbs and the vulva. The mucous membranes of the mouth and the conjunctiva were not spared as well. Her symptoms started three days after commencement of a new haart regimen comprising truvada and nevirapine when a urine pregnancy test confirmed pregnancy. See figures 1 and 2.



Figure 1 Mrs V.A.D with Oral and cutaneous lesions



Figure 2. Cutaneous lesions on her back

The initial symptom was mild and patient continued her medication in the hope that this will resolve spontaneously. With exacerbation of the symptoms, she represented to the ART clinic where a diagnosis of Stevens Johnson Syndrome was made, her medications were stopped and she was admitted to the ward for further care. Her vital signs on admission were a temperature of 37.2 degrees Celsius, respiratory rate of 18/minute, a pulse rate of 82/minute, Blood pressure of 110/70 mmhg. She was bed-ridden, with inability to eat due to the mouth ulcers and inability to defecate. Initial treatment consisted of investigations; a FBC which showed a total white cell count of 8,000 cells per ml and packed cell volume of 35%. The liver function tests and urea and electrolytes were all within normal range. Her CD 4 count was 350 cells /ml. Rehydration was commenced with intravenous fluid 55 dextrose saline one litre to be given eight hourly. Intravenous amoxicillin clavulanic acid 1.2g 12 hourly and metronidazole 500mg eight hourly, oral nystatin 100,000 iu six hourly and gentamycin eye drops were the medications given. Skin ulcers were treated with dermazin cream and intravenous hydrocortisone 100mg was given. A check on the pharmacy for

the remnant of the nevirapine to obtain the batch number and expiry date for reporting was unrewarding as the drugs were said to have been destroyed by burning.

Over a period of three weeks on admission, her condition gradually improved. She began to tolerate oral feeds and ambulation became easier. The skin ulcers gradually healed. See figure 3.



Figure 3. Healed lesions on the leg

Her oral medications were recommenced as Truvada and efavirenz, haematincs were added and she was registered for antenatal care in line with the principle of PMTCT (Prevention of mother to child transmission of HIV). An ultrasound scan done on admission confirmed a live singleton intrauterine gestation with a gestational age of 16 weeks and an expected date of delivery of 23/10/2013. Mrs V.A.D. was subsequently discharged and was seen at follow up a month later. She was cheerful, healthy looking but with residual hyperpigmented patches all over the body. Her CD 4 count was 365 cells /ml and she had started feeling foetal kicks. See figure 4 and 5.



Figure 4. Mrs V.A.D at first follow up



Figure 5. At second follow up

### Discussion:

The muco-cutaneous manifestations of Stevens Johnson Syndrome which include acute skin blisters and mucous membrane eruptions<sup>(8)</sup> were seen in this patient. These were severe enough to incapacitate the patient for about two weeks and are not unexpected<sup>(9)</sup>. Before prescribing Antiretroviral drugs for patients, it is imperative to take a good history and educate the patient on adverse reactions associated with the drug and the need for prompt presentation to hospital should it occur<sup>(7, 10)</sup>. This was not done in the case of this patient. The management principle which involves recognition and prompt withdrawal of causative agents, fluid therapy, skin care, antibiotics and steroid use were adhered to. These contributed in no small measure to the recovery of this patient. It is imperative to mention here that in addition, co-management with other specialists including the dermatologist, ophthalmologist, respiratory physician, plastic surgeon and gastroenterologist will also help in severe cases<sup>(11)</sup>. Pharmacovigilance is defined as the science and activities relating to the detection, assessment, understanding and prevention of adverse effects or any other drug related problem<sup>(12)</sup>. This helps to prevent further damage and prevent future occurrence. Various studies have shown that pharmacovigilance awareness is low and practice still needs to be improved in our environment<sup>(13, 14)</sup>. The destruction of the drugs in the pharmacy is proof that a lot needs to be done in this area. Morbidity and mortality from Stevens Johnson Syndrome in pregnant women with HIV can be further reduced if basic principles of good history taking, counseling, high index of suspicion for early detection of reactions, aggressive management and proper documentation and notification of cases are carried out.

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