

# A Case report: Herpes zoster IRIS in pregnancy

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## Abstract

Pregnant women are increasingly being initiated on antiretroviral therapy either as part of prevention of mother to child transmission of HIV or as purely highly active antiretroviral therapy.

In this case report, we describe a 26 year old woman who was 28 weeks pregnant and who presented after 4 weeks of initiation of antiretroviral therapy with a herpes zoster eruption and how the case was managed at the Infectious Diseases Institute, Kampala, Uganda.

*African Health Sciences* 2009; 9(4): 294 -295

## Introduction

The incidence of Immune reconstitution inflammatory syndromes is decreasing globally due to implementation of antiretroviral therapy roll out programmes and increased access to treatment. However, in resource limited settings, immune reconstitution syndromes are continually being reported due to decreased availability of drugs and poor health seeking behaviour of patients.

Immune reconstitution inflammatory syndrome typically appears within the first 8 weeks of starting highly active antiretroviral treatment (HAART), particularly in patients with a low CD4+ count.

Restoration of host immunity, particularly if abrupt and rapid, may have adverse sequelae, and when a threshold amount is reached, the host can become gravely ill with symptomatic disease resulting from immune reconstitution<sup>1</sup>. Pregnancy is a state of relative immunosuppression characterized by anti-inflammatory cellular responses that promote tolerance to foetal antigens<sup>2-4</sup>.

## Case history

A 26 year old lady at 28 weeks of her third pregnancy was started on a free fixed dose combination of stavudine (30mg), lamivudine plus nevirapine (Triomune-30<sup>TM</sup>) at the Infectious Diseases Institute, Mulago Hospital Kampala, Uganda.

At ART initiation, she weighed 55kg and her CD4+ cell count was 277cells/mL. There was no prior history of vesicular eruptions. Unfortunately her viral loads could not be measured due to the high costs involved. Four weeks later the patient developed vesicular eruptions that had a dermatological distribution involving the left postero-lateral aspect of the left arm C4 and left infra-scapular regions T2, T3 dermatomes. There was no systemic involvement. There was no history of other opportunistic infections.

She was subsequently started on acyclovir, indomethacin and amitryptilline. She was counselled to continue and adhere to her ART regimen and to continue antenatal visits. Two weeks later, the lesions had dried up but the post herpetic neuralgia persisted. Review of the patient after two weeks showed marked improvement in the post herpetic neuralgia and gave a good report from her antenatal check up. Outcome of the pregnancy was a healthy full-term, male baby, 3.2kg, scoring an Apgar of 9-10 via spontaneous vaginal delivery. There were no abnormalities detected.

## Discussion

Few cases of immune reconstitution inflammatory syndrome in pregnancy have been reported in literature. Pregnancy is an immunosuppressive status, characterised by anti-inflammatory responses and this is required to maintain the pregnancy<sup>2,5,6</sup>. In this particular case a combination of HIV infection with low CD4+ cell count and the pregnancy and the initiation of ART could have initiated the process of immune reactivation leading to the HZ eruptions.

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A study involving an ethnically diverse cohort of HIV infected individuals initiating HAART documented that a vast majority of the IRIS events were attributable to either genital herpes (50% of events) or anogenital warts (23% of events)<sup>7</sup> Cellular response to herpes simplex virus infection is significantly lower during the second and third trimesters of pregnancy<sup>8</sup>. Immune reconstitution inflammatory syndrome on the other hand is usually seen in patients initiating ART with low CD4 counts. This does suggest that IRIS may occur in patients initiating ART with high CD4 counts.

Immune reconstitution inflammatory syndrome therefore occurs and we recommend close follow up of pregnant women started on ART.

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