

## Case Report

# Increasing rates of obstetric haemorrhage in a setting of high HIV sero-prevalence: Re-analysis of data from deaths due to obstetric haemorrhage in South Africa

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According to the latest South African report on confidential enquiry into maternal deaths, obstetric haemorrhage is now the leading cause of direct maternal deaths [1]. This increase in the last report comes in the backdrop of the most welcome reduction in deaths from HIV/AIDS, subsequent to increased access to use of antiretroviral therapy (ART) for pregnant women. In the

latest report about 60% of these were associated with caesarean sections. Interestingly in the mind of everyone is whether the surgical skills at caesarean sections are deteriorating. However, there has not been any significant deterioration in infrastructure as well as possibly no change in skills transfer.

**Table 1.** Evolving antiretroviral regimen for pregnant women and number of reported deaths from Obstetric haemorrhage.

Year	Regimen for HIV infected pregnant women	No of deaths from obstetric haemorrhage over different triennia (Saving Mothers Report)
2002	- sd NVP introduced for all women	N=442, (2002 – 2004)
	-	N=491, (2005 – 2007)
2008	Dual Therapy:	N=688 (2008-2010)
	- AZT starting @ 28 weeks + sd NVP for those with CD 4 >200	
	- HAART for those with CD 4 <200	
Dec 2009 /2010	- AZT started at 14 weeks	
	- Increased CD4 count threshold to <350,	
April 2012	- As above	N=684 (2011 – 2013)
	- NVP removed	
April 2013	- FDC for all until after breastfeeding	

It is worth noting that the Saving Mothers' Report of the 2008-2010 reported an excess of 200 deaths above that were seen in previous triennia, and this excess has persisted in subsequent reports [2]. This coincided with

the introduction of HAART to patients in the public sector in 2008 – Table 1.

In the last 2 triennial reports, within the category of obstetric haemorrhage as the primary cause of death, the

**Table 2.** Analysis of HIV status amongst obstetric haemorrhage deaths.

Triennium	HIV -ve	HIV +ve not requiring HAART	AIDS not receiving HAART	AIDS receiving HAART
2005-2007	29%		23%	
2008-2010		21.2%	4.9%	9.7%
	38.7%		35.8%	
2011-2013		18.1%	6.2%	10.1
	25.8%		34.4%	

proportion of HIV infected women was gradually increasing from 23%, 36% and 34% in the 2008, 2011 and 2014 reports respectively [1,2]. In the latest report, there was a significant difference between the HIV infected (34%) and uninfected, (26%),  $p=0.00006$ . Importantly, there were 1.5 – 2x more women who were AIDS receiving HAART compared to those with AIDS and not on HAART amongst the obstetric haemorrhage mortalities, RR 2.02 (1.35 – 3.03) and 1.57 (1.11 – 2.22) according to the 2011 and 2014 reports [1,2]. Table 2. This is in line with what Chweneyagae et al., reported in 2012, drawing from the data of the 2011 report, and stated that “among women who died from obstetric haemorrhage, the institutional mortality ratios were 17.2 and 38.4/100 000 live births in the HIV uninfected and infected respectively [3].

The current re-analysis of the South African data adds to the body of evidence of increasing haemorrhage amongst HIV infected pregnant women, which may be associated with the use of antiretroviral treatment. Curtis et al reported increased bleeding in HIV infected women, which was associated with anaemia [4,5]. HIV associated thrombocytopenia as well as chorioamnionitis may result in increased bleeding. Subclinical chorioamnionitis may lead to not only higher rates of abruption, but also poor contractility of the uterus postpartum. Alternatively some form of coagulopathy could be responsible.

## REFERENCES

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