



Postpartum haemorrhage (PPH) is a leading cause of maternal death in the countries of sub-Saharan Africa, several of which have high overall maternal mortality rates and are not on track for achieving Millennium Development Goal 5.

PPH seriously tests the functioning of the health system and the skills of health workers. Patients often do not survive referral to another level of care, so effective management including resuscitation needs to be available at the first point of contact, often the district hospital (level 1 health facility).¹

In South Africa, the Saving Mothers reports produced every 3 years by the National Committee for Confidential Enquiry into Maternal Deaths (NCCEMD) show that obstetric haemorrhage is the third most common cause of maternal death in South Africa, accounting for 491 (12.4%) of all maternal deaths during 2005 - 2007.¹ Maternal deaths due to haemorrhage are not decreasing. The maternal mortality rate (number of maternal deaths per 100 000 live births) due to obstetric haemorrhage was 13.6 in 1999 - 2001, 19.5 in 2002 - 2004 and 18.8 in 2005 - 2007. Over 75% of PPH deaths occur at level 1 and 2 hospitals, with 43% of PPH deaths occurring at level 1 hospitals.

The major conditions causing obstetric haemorrhage in South Africa during 2005 - 2007 were abruptio placentae (9.8%), retained placenta (17.9%), uterine atony (13.6%), uterine rupture (16.3%) and other uterine trauma, predominantly bleeding during and after caesarean section (CS) (28.5%). Many of these conditions can be prevented by timeous management of prolonged labour.

The large number of deaths due to bleeding associated with CS and uterine rupture raises concern about technical skills, particularly at level 1 hospitals.

Obstetric haemorrhage was the cause of maternal death most likely to be assessed as avoidable, with 80% of PPH deaths identified as 'clearly avoidable'. In addition to patient-related and administrative factors, sub-standard care remained a major problem, contributing to over 40% of deaths for every level of care. It included failure to carry out essential steps of prescribed protocols or serious delays in doing so, and lack of appropriate skills. Resuscitation of bleeding patients was also a serious problem.

In this issue of SAJOG, Agrawal *et al.* present an unusual case of secondary PPH managed by balloon tamponade.²

Secondary PPH, although a less common cause of obstetric haemorrhage, constitutes a major management problem. It is usually due to retained products of conception with uterine sepsis, and requires hysterectomy if not successfully managed with antibiotics and uterine evacuation. The article describes successful management with uterine balloon tamponade. Uterine balloon tamponade is better known for treatment of primary PPH from uterine atony or placenta praevia. This technique, together with uterine compression sutures, has a very important role to play in reducing deaths from obstetric haemorrhage.³⁻⁵ They have an 80 - 90% success rate in arresting haemorrhage without the need for hysterectomy, and are skills that can be learnt by general doctors who perform CS, such as medical officers in level 1 hospitals. In South Africa, where bleeding associated with CS is the main sub-category of obstetric haemorrhage, these techniques have the potential to be particularly valuable.

A monograph on PPH produced by the NCCEMD last year contains clear guidelines for doctors, midwives and paramedics on how to manage women with massive PPH.⁶ There are algorithms with care pathways for managing PPH, including resuscitation and sequential use of oxytocic agents. Algorithms are presented both for managing bleeding after vaginal delivery and for bleeding associated with CS. In particular there are detailed descriptions, with illustrations, of newer modalities to treat PPH, such as uterine compression sutures and balloon tamponade. In addition to commercially available balloon tamponade systems, use of locally available items such as surgical gloves and condoms is described as a cheaper alternative.

It is vital that all levels of care can deal with the emergency management of PPH and are aware of the factors required to prevent it. This requires sufficient facilities, supplies and skilled staff. Major improvements in the functioning of the health system and appropriate training of doctors and midwives at all levels of care are essential if deaths from this preventable cause of maternal mortality are to be reduced.

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Erratum

We regret that an error occurred on page 17 of the March 2011 *SAJOG* (Vol. 17 No. 1) in the scientific letter entitled 'Early discharge from hospital after caesarean section at Chris Hani Baragwanath Hospital', in that the author details were omitted. Their names and affiliations are as follows:

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The online version of the article was corrected soon after publication. We apologise for the error.