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Short Communication

Challenges in the Management of Postpartum Haemorrhage in Sub-Saharan Africa

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Introduction

Evidence abounds that postpartum haemorrhage (PPH) is the leading cause of global maternal mortality and disproportionately affects Africa [1]. Between the year 2003 to 2009, 480,000 maternal deaths were recorded worldwide [1]. Of these, 41.6% of PPH-related maternal deaths occurred in sub-Saharan Africa (SSA) [1]. For instance, in Cameroon, a SSA country, the current maternal mortality ratio (MMR) is 596 per 100, 000 live births [1]. These statistics re-iterate the exorbitant high burden of maternal mortality in this part of the African continent. Meanwhile, the Sustainable Millenium Development Goals aim to target a global MMR < 70 deaths per 100,000 live births by 2030 [2]. Hence, much efforts still need to be done to reduce the PPH-related maternal deaths in SSA. The way forward partly entails tackling PPH which has been reported as the primary cause of maternal deaths in several hospital-based audit reports [3,4]. It's worth mentioning that a composite of factors like poverty [4], inadequate attendance antenatal care coverage [3], and late hospital referral [4] further contribute to the burden of PPH-related maternal deaths in SSA.

WHO guidelines on the management of PPH, stipulate successive use of pharmacological strategies, non- pharmacological measures, uterus preserving surgical interventions and lastly, hysterectomy for refractory PPH [5]. However, the use of all these measures have some drawbacks in SSA which need to be addressed in view of making recommendations. Firstly, guidelines[5] recommend the use of injectable uterotonics like oxytocin, ergometrine, fixed-dose combination of oxytocin and ergometrine, prostaglandin and carbetocin), misoprostol tablet (via the oral, sublingual and rectal routes), intravenous tranexamic acid and injectable recombinant factor VIIa in the management of PPH due to uterine atony. Good quality evidence from a systematic review suggests that the use of oxytocin for the active management of the third stage of labour decreases the risk of PPH by 60% [6]. Secondly, although, routinely used in SSA, it should be noted that oxytocin has limited application in this region as a result of its heat instability [7]. Furthermore, the WHO guidelines [5] were written a decade ago. The use of new potent and safe uterotonics drugs such as intravenous sulprostone as second-line uterotonic in the management of atonic PPH [8,9], were not taken into account in these guidelines [5]. Moreover, there is unavailability of some uterotonics like fixed-dose combination of oxytocin and ergometrine, carbetocin, recombinant factor VIIa and sulprostone in the management of refractory PPH in SSA [10].

With regards to the non- pharmacological also called non-medical measures, the same guidelines [5] stipulate to successively used uterine massage, bimanual uterine compression and then compression of the abdominal aorta. In addition, repair of vaginal or cervical lacerations and manual uterine revision when indicated are other non-medical measures to manage PHH [5]. However, there are limited skilled practioners who actually master how to perform non-medical measures in SSA [7,11].

Lastly, when all conservative methods to treat PPH fail, the term refractory PPH is used [10]. Refractory PPH has a higher mortality rate compared to the non-refractory type [10]. Here, uterus preserving surgeries such as hypogastric and uterine artery ligations, B-Lynch uterus suturing and Tsirulnikov triple ligation are recommended as first-line surgical treatment [5] due to their conserva-

tive nature and reduced risks for psychological trauma [12,13]. When conservative surgery fails, peripartum hysterectomy is the last option for intractable PPH [5]. However, there is controversy in resource-limited settings as to whether to opt for uterus preserving surgeries or hysterectomy as first-line surgical treatment of refractory PPH [10]. The highest level of evidence in these guidelines on PPH management stems from pooled case series and case reports without a control group [5]. However, more recently the firts ever cohort study [10], obviously superior in level of evidence to the aforementioned case series and case reports mentioned in the guidelines [5], showed that hysterectomy was safer than uterus preserving surgeries in the first intension to treat refractory PPH in SSA. In this cohort study, compared to uterus preserving surgeries, hysterectomy statistically and significantly reduced the risk of maternal deaths and postoperative infections in womem with refractory PPH [10]. The author advocated the reason for these findings were due to the fact that a significant amount of women with refractory haemorrhage often presented late to the hospital and in a state of haemorrhagic shock [10]. Also, the irregular supply of blood products for resuscitation and a lack of a national insurance health policy to treat patients without prior payment of the cost of heath care may explained the findings in this cohort study [10]. Hence, WHO recommendations [5] for the management of intractable PPH may need a revision, as hysterectomy seemed safer than uterus preserving surgeries in SSA using good-quality studies [10].

In conclusion, PPH is still the leading cause of maternal mortality in SSA. The main challenges associated with its management in this low-resource setting are unavailability of potent uterotonics, unskilled personnel to perform non-medical management of PPH, and an ongoing debate on whether radical surgery via hysterectomy may be safer than conservative uterus surgery as first-line surgical management of intractable PPh. Hence, health policy-makers in SSA should but at the disposal of all hospitals a regular supply of these potent uterotonics for a life-saving purpose. Furthermore, good antenatal coverage, creation or provision of blood banks with a regular availabilty of blood products for resusctation, training of healthcare staff on non-medical management of PPH, as well as organization of regular refresher courses on non-medical management of PPH are other vital points to curb the burdern of PPH-realated maternal mortality in SSA. Meanwhile, more good-quality studies are needed to ascertain the safety of hysterectomy over uterus preserving surgeries as first-line surgical management of intractable PPH in SSA. Lastly, the institution of a national health insurance policy in this low-resource setting would help to render healthcare accessible to the vulnerable pregnant women popomation. However, cost-benefit studies are warranted in this regards. Overall, these recommendations will go a long way to build sustainable healthcare systems that could help reduce the MMR to the target of less than 70 maternal deaths per 100,000 live births by 2030 in SSA.

Competing Interests

The authors declare that they have no competing interests.

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