Postpartum Haemorrhage: A Continuing Tragedy in Malaysia

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Globally, over a half million women die annually from causes related to pregnancy and childbirth. In the developing world, postpartum haemorrhage (PPH) accounts for up to half of all maternal deaths. The wife of the Moghul Emperor Shah Jahan of India, Empress Mumtaz, had 14 children and died after her last childbirth of PPH in 1630. So great was the Emperor's love for his wife that he built the world's most beautiful tomb in her memory—the Taj Mahal.

Malaysia has experienced dramatic improvements in the provision of Maternal and Child Health (MCH) services throughout the post-independence era. The Division of Family Health Development of the Ministry of Health, Malaysia through various technical committees introduced Programmes and Management Protocols to reduce maternal morbidity and mortality. A rigorous confidential system of enquiry into maternal deaths (CEMD) based on that of the triennial reports of England and Wales was introduced in Malaysia since 1991, audited by individual case note review at hospital, state and national levels. The objective was to identify shortfalls in care, recommend remedial measures and thus improve standards of care. Thus far, seven reports have been published (1991, 1992, 1993, 1994, 1995-96, 1997-2000, and 2001-05).

The average blood loss during a normal vaginal birth has been estimated at 500 ml and caesarian delivery at 1,000 ml. A widely used definition for PPH currently is that proposed by the World Health Organisation (WHO) as any blood loss from the genital tract during delivery above 500 ml. The first CEMD alluded to the incidence of PPH maternal death to be 27.2% of the total 224 maternal deaths then. It is gratifying to note that this figure has declined to 13.6% of 125 maternal deaths in the 2001-05 report. Almost half of the deaths were due to atony of the uterus followed by retained products of conception. This decline is certainly not in pari passu with the PPH mortality in the United Kingdom (UK) where there were only five deaths compared to 17 deaths in Malaysia. Hence it is important to focus on aggressive measures in the direction to further reduce PPH maternal deaths. It is of paramount importance that all efforts are focused in this direction by the involvement of the MOH, the Malaysian Medical Association, the Academy of Medicine Malaysia and the Obstetrics and Gynaecological Society of Malaysia. However, it has to be acknowledged that these agencies are already putting in great effort towards this goal. The measures undertaken to address high rates of “substandard care” should focus on three critical areas: reduction in delays in seeking medical care, delay in reaching healthcare facilities and delay in appropriate care in a health institution. These are problems encountered mainly in developing and third world countries.

Risk factors associated with lifestyle changes

Lifestyle changes in recent years have resulted in lower maternal resilience towards safe reproductive ability. One of these changes include the prospect of more women seeking tertiary education leading to delayed child bearing and increased mean maternal age at child birth. In addition, with aging, maternal obesity (BMI > 30 kg/m²), and complex medical disorders are bound to occur. The increasing number of multiple pregnancies in the wake of novel reproductive techniques, with the consequence of increased surgical interventions, is also a contributory risk factor for PPH. Furthermore, caesarean section rates are rising due partially to patient request, fear of medico-legal litigations and recent adverse reports on anorectal function. This will lead to more placenta praevia and accreta in subsequent pregnancies. Morbidly adherent placentae are becoming increasingly frequent; the numbers requiring hysterectomy then rises too.

Strategies for the prevention of PPH

Historically, Crede's manoeuvre, was the first to introduce the method for management of third stage of labour. The introduction of ergometrine and blood transfusion facilities, emergency obstetric services or “flying squads” came in the thirties. Modern day policy of “Active management of labour” pioneered by O’Drisoll in 1969, is a means of reducing the number of prolonged labours to fewer than 12 hours and operative delivery rates to a minimum. The key to the management of PPH involves rapid recognition and diagnosis of the condition, restoration of circulatory blood volume to maintain tissue perfusion and oxygenation with a simultaneous search for the cause.

An assessment of vital signs (level of consciousness, pulse, blood pressure and oxygen saturation, if available) and amount of blood loss accurately must be made. Immediate resuscitation measures include inserting two large-bore (14G) intravenous cannulae. Rapid infusion of warmed crystalloids...
taught to all levels of healthcare personnel periodically to
account for rapid attrition and retirement of staff.

After detailed evaluation and when medical treatment fails,
various surgical interventions may be attempted. Uterine
packing failed to disfavour initially because of infection,
however, a recent resurgence of interest has shown favourable
outcomes. Bimanual and aortic compression during transfer
cases to tertiary centres has been discussed in the CEMDs.

Ensuring vigilant care of critical patients in high dependency
and intensive care units with better monitoring systems and
trained personnel in post-operative care has been consistently
echoed in the peri-operative mortality audits of Malaysia. This
issue has also been alluded to in the Peri-Operative Care
Study-Protocol: November 2009 of the National Confidential
Enquiry into Patient Outcome and Death (NCEPOD) in the
UK.

Updated management protocols and training in the
management of massive obstetric haemorrhage must be
taught to all levels of healthcare personnel periodically to
account for rapid attrition and retirement of staff. Infrastructure strengthening has been an ongoing exercise in
all the 5-Year Malaysia Plans. Unlike the situation before
Independence in 1957, geographical remoteness, inaccessibility to healthcare facilities, rapid transportation of
ill-patients to tertiary centres, availability of blood
transfusion services have all been addressed. There are more
hospitals and primary care health facilities built in all states.
Antenatal risk approach study using the four colour codes
denoting the severity of risk had been adopted with practical
guidelines for the nursing personnel at primary care levels.
The colour coding was introduced as a triaging strategy.
The objective of this study was to assess the level of appropriate
management and outcomes in obstetrics in selected districts
with high and low maternal mortality. However, the colour
assignment was found accurate only in 56.1% of cases in low
maternal mortality areas and 55.8% in high maternal
mortality areas.

The Obstetric Red Alert System was also established to
facilitate a fast, efficient and coordinated team management
of selected obstetric emergencies such as eclampsia, severe
haemorrhage, disseminated intravascular coagulation and
obstetric shock. Personnel on call out of hours carry mobile
phones to avoid delays in tracking them down through the
hospital switchboard. Despite this recommendation, the
system is not universally practiced in all hospitals due to
implementation problems. Besides, obstetric drills are also
used increasingly in many public units, to test, improve and
maintain clinical awareness and highlight system failures.
Conduct of regular drills enables to test effectiveness,
unfortunately this is not carried out in all centres.

There is a clear need for fertility regulation in high risk
groups. All the seven CEMD reports have been relentlessly
echoing the high maternal mortality in high parity and older
mothers. Family planning is one of the pillars of Safe
Motherhood Initiative (SMI). The initiative is an
international effort to raise awareness of the scope and
dimensions of maternal mortality. The 5th Report on CEMD
reiterates that generally less than a quarter (25%) practised
contraception. Even the 6th and 7th CEMD Reports reiterates
on the significance of this issue. It was found that the use of
contraception amongst grand multiparae was relatively lower
than in those who were Para 1-5 group. The reason for such
low uptake was due to unawareness and lack of knowledge.
This needs to be urgently addressed.

To address the needs of mothers living in remote,
geographically inaccessible rural areas, who express fear of
distance and unfamiliar atmosphere of hospital labour rooms
with high technology equipment, they are encouraged to
deliver in rural Alternative Birthing Centres (ABCs). All the
seven CEMD Reports have clearly shown that the majority of
these mothers of high parity, with lack of antenatal care,
short birth intervals, and advanced maternal age have a high
preponderance to PPH. ABCs are to be manned by qualified
midwives with availability of facilities for transfer to base
hospitals in emergencies. Many such centres are located in
rural areas of Kelantan and in other states as well.

The Impact of CEMDs made in combating PPH

PPH throughout the last 20 years from the inception of the
first CEMD report in 1991 till today, has remained one of the
leading causes of maternal mortality in Malaysia although it
dropped from 27.5% of total maternal deaths in 1994 to
16% of total maternal deaths over 5 years from 2001 to 2005.
Many guidelines, management protocols on PPH, recommendations on infrastructure strengthening, training,
 Improvements in work processes have been recommended.
 However, the delay in release of the CEMD reports have
 minimized the impact they have in further reducing PPH and
Reports have been credited in changes in practice (67.7%), training (66.7%), development of protocols (61.1%), increased staffing (43.6%), development of facilities (39.8%) and allocation of increased budget in (29.5%). Although it appears positive
steps are taken, the uptake of contraception, implementation of the red alert system, colour coding system, obstetric drills
are still not fully implemented in many health care
institutions.
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Malaysia today is committed to achieving the Millennium Development Goals (MDG 5)\textsuperscript{18}. The MDG-5 calls for a reduction of maternal mortality by 75% in 2015 from 1990 levels and this philosophy is yet to be seen. In 1987, health experts, development professionals and policy makers gathered in Nairobi to inaugurate the global SMI\textsuperscript{14}. Malaysia too adopted this Initiative but has fallen short of the goal it set almost 20 years ago to reduce maternal deaths by 50 per cent by the year 2000. Despite the efforts put in by all senior obstetricians (resource persons), policy makers, stakeholders and other healthcare providers in the eighties and nineties in formulation of the CEMD recommendations, PPH continues to be a leading cause of maternal mortality in Malaysia. This is partly because of late recognition of the problem, delay to institute care, delay in implementing policies, inadequate optimization and inappropriate care rendered.

REFERENCES