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Practices related to postpartum uterine involution in the Western Highlands of Guatemala

K.A. Radoff, CNM, WHNP (Clinical Instructor, Certified Nurse-Midwife)[a,*], Lisa M. Thompson, RN, FNP, PhD (Assistant Professor)[b], KC Bly, RN, CNM, WHNP (Certified Nurse-Midwife)[c], Carolina Romero, BS (Project Coordinator)[d]

[a] Boston University, Department of Obstetrics and Gynecology, Boston, USA
[b] University of California, Department of Family Health Care Nursing, San Francisco, USA
[c] Hartford Hospital Department of Women's Health Services, USA
[d] Universidad del Valle de Guatemala, San Lorenzo, San Marcos, Guatemala

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ABSTRACT

Background: Guatemala has the third highest level of maternal mortality in Latin America. Postpartum haemorrhage is the main cause of maternal mortality. In rural Guatemala, most women rely on Traditional Birth Attendants (TBAs) during labour, delivery, and the postpartum period. Little is known about current postpartum practices that may contribute to uterine involution provided by Mam- and Spanish-speaking TBAs in the Western Highlands of Guatemala.

Methods: a qualitative study was conducted with 39 women who participated in five focus groups in the San Marcos Department of Guatemala. Questions regarding postpartum practices were discussed during four focus groups of TBAs and one group of auxiliary nurses.

Results: three postpartum practices believed to aid postpartum uterine involution were identified: use of the chuj (Mam) (Spanish, temazcal), a traditional wood-fired sauna-bath used by Mam-speaking women; herbal baths and teas; and administration of biomedicines.

Conclusions: TBAs provide the majority of care to women during childbirth and the postpartum period and have developed a set of practices to prevent and treat postpartum haemorrhage. Integration of these practices may prove an effective method to reduce maternal morbidity and mortality in the Western Highlands of Guatemala.

Introduction

Maternal mortality is defined as the number of women who die due to childbirth related reasons during pregnancy, delivery, or the 42 day postpartum period (WHO, 2004). In Guatemala, maternal mortality is estimated at 110 maternal deaths per 100,000 live births (WHO, UNICEF, UNFPA, World Bank, 2010.). Women at highest risk for maternal mortality in Guatemala are indigenous, multiparous, have low levels of education, have geographic barriers to reaching health centres, and give birth at home (Tzul et al., 2006; SEGEPLAN, 2010). Among rural, indigenous women in the Western Highlands of Guatemala, levels of maternal mortality are three times higher than national rates (MSPAS, 2010). In 2007, the San Marcos Department reported a maternal mortality rate of 107 per 100,000 live births (SEGEPLAN, 2010). In this region of Guatemala, half of maternal deaths occurred at home (MSPAS, 2010). The Government of Guatemala reported that in 2010 the country had made insufficient progress in meeting Millennium Development Goal 5 (MDG5) to reduce by three-quarters maternal mortality between 1990 and 2015 (SEGEPLAN, 2010).

Postpartum haemorrhage (PPH) is the primary direct cause of maternal mortality in Guatemala and low-income countries worldwide (WHO, 2005; SEGEPLAN, 2010). In a systematic review by Khan et al. (2006) 20.8% of maternal deaths in Latin America and the Caribbean were due to PPH.

Traditional Birth Attendants (TBAs) attend an estimated 50–90% of Guatemala's births and over 90% in some rural areas (Kwast, 1995; Replogle, 2007; Maupin, 2008). Little qualitative research exists regarding current postpartum practices used by TBAs in rural Western Highland Guatemalan communities to promote uterine involution, which may prevent PPH. The aim of the present study was to identify traditional postpartum practices among Spanish- and Mam-speaking (Mayan dialect) TBAs in rural Guatemalan communities.

* Corresponding author at: Boston University, Department of Obstetrics and Gynecology, 85 E. Concord St, 6th floor, Boston, MA 02118, USA.
E-mail addresses: kari.radoff@bmc.org (K. Radoff RN), lisa.thompson@nursing.ucsf.edu (L.M. Thompson), kcbly@yahoo.com (KC Bly).

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Background

This qualitative study was conducted in the San Marcos Department, located in the Western Highlands of Guatemala. San Marcos has a population of 1,019,719 of which 30% are Mam-speaking Mayan and 70% are Spanish-speaking Ladino inhabitants (INE, 2011). San Marcos is characterised by its low socio-economic status with 73% of inhabitants living in abject poverty (less than the equivalent of US$554 annually) and 24% in extreme poverty (less than the equivalent of US$245 annually) (SEGEPLAN, 2002). Additionally, 32% of women in the Western Highlands have received no formal education (INE et al., 1999b).

The San Marcos Department is a mountainous region covering 925 miles^2. The rural highlands are densely populated with indigenous communities that maintain their traditional languages and health practices, including TBA-attended homebirth and use of a traditional wood-fired sauna-bath (*chuj* in Mam) for bathing and traditional healing (Foster et al., 2004). In the past decade, the Government of Guatemala has made great strides in improving the local health-care infrastructure. The Ministry of Health in San Marcos manages two hospitals, a Maternal–Infant health centre, 14 health centres that are open 24-hrs a day, and 20 ambulances to facilitate transport from rural health centres to regional hospitals in San Marcos (SEGEPLAN, 2010). However, due to geographic and economic barriers, it remains difficult for childbearing women residing in remote, rural communities to access urban health centres that have the capacity to manage obstetric emergencies (SEGEPLAN, 2010).

Prenatal, delivery, and postpartum care is provided primarily by TBAs, and secondarily by skilled birth attendants, including nurses and physicians (Glei and Goldman, 2000). In the most recent Guatemalan Demographic and Health Survey, 38% of the women in the San Marcos Department received prenatal care from a TBA, 22% from a physician, 12% from a nurse, and 28% had no care (INE et al., 1999a). In 1999, 86% of women in the region delivered at home (67% of births attended by TBAs, 14% attended by a friend or family member, and 5% unattended). The remaining births were attended by physicians (11%) and nurses (3%) in a hospital (INE et al., 1999a). Presently, close to 60% of deliveries continue to be attended by TBAs in the San Marcos Department (SEGEPLAN, 2010). Though TBAs are an integral part of pregnancy and delivery care, births attended by physicians and nurses have increased with efforts to meet the MDG5 objective to promote skilled attendance at birth (SEGEPLAN, 2010). In the Western Highlands region, skilled attendance by nurses and physicians accounted for 31% of deliveries in 2002 and 45% in 2008–2009 (SEGEPLAN, 2010).

Forty-four maternal deaths were reported in the San Marcos Department in 2010 (MSPAS, 2010). Of these deaths, 19 occurred in the hospital, 22 at home, and one at a local health centre (MSPAS, 2010).

The Phases of Delay Theory explains non-medical factors that contribute to delays in receiving emergency obstetric care resulting in maternal death (Thaddeus and Maine, 1994). Three delay phases are categorised as identifying an obstetric emergency; accessing a health-care facility; and in receiving quality care at a health-care facility. A Guatemalan study classified maternal deaths using this theory, though more than one delay phase can contribute to mortality: 30% were related to a lack of identifying an obstetric emergency; 30% delayed transfer to a health centre when signs of an emergency arose; 23% did not transfer to a health centre due to lack of financial resources, transportation, or distance from a health-care facility; and 41% lacked the necessary conditions or skills to treat the emergency once the woman presented to a health-care facility (SEGEPLAN, 2010). Maternal deaths may not have occurred at the location of birth, but while in transit to a health-care facility or upon arrival in grave condition to a health-care facility (SEGEPLAN, 2010).

Tzul et al. (2006) investigated causes of extra-hospital and intra-hospital deaths of childbearing women in Guatemala. Overall, they found that of the 649 maternal deaths that occurred in 2000, mortality was more likely for births attended outside of the hospital, 385 vs. 200, with 64 occurring in an unknown location. Births to women experiencing extra-hospital death were more frequently attended by TBAs (59.89%) or a family member (28.23%), and rarely by a physician (4.49%) or an unknown attendant (7.39%). Births to women experiencing intra-hospital death were attended by TBAs (13.70%), family members (9.26%), and physicians (68.52%), indicating that deaths attended by TBAs and family members most likely occurred after transfer to the hospital.

In 2007, approximately 42% of maternal mortalities in Guatemala were related to PPH, the leading cause of maternal death worldwide (SEGEPLAN, 2010). Principal causes of maternal deaths were as follows: PPH (42%); eclampsia (18%); postpartum infections (15%); and abortions (10%) (15% from unknown and indirect causes) (SEGEPLAN, 2010). Similar to the national statistics, the primary cause of maternal death in San Marcos in 2010 was due to PPH (C. Fuentes Gonzales, personal communication, 11 December 2011).

The International Confederation of Midwives (ICM) and the International Federation of Gynaecologists and Obstetricians (FIGO) advocate for active management of the third stage of labour (AMTSL) to prevent PPH (ICM/FIGO, 2003). AMTSL includes administration of uterotonic agents such as oxytocin, controlled traction of the umbilical cord, and uterine fundal massage after delivery of the placenta. These techniques have been proven to reduce the quantity of postpartum blood loss and thus prevent PPH (ICM/FIGO, 2003). In low resource settings such as San Marcos, where most deliveries are attended by TBAs, AMTSL has not been incorporated into the care of labouring women at home.

High rates of maternal mortality in the region, low use of facility-based obstetric care, and reliance on TBAs are most likely the result of various socio-economic factors, traditional practices, and culturally derived constructs related to childbearing, referred to as 'cosmovision' (Thaddeus and Maine, 1994; Callister and Vega, 1998; Glei et al., 2003; Berry, 2006, 2008). This cosmovision is constructed upon beliefs that birth is a sacred ritual (Walsh, 2006), ethnomedical interpretations of obstetric danger signs, and a general mistrust of western health-care (Berry, 2008). These factors may contribute to delays in receiving obstetric care when emergencies such as PPH arise (Thaddeus and Maine, 1994).

Cross-cultural techniques used by TBAs during the postpartum period have developed throughout human evolution to prevent PPH, and these practices often emulate the steps of AMTSL (Abrams and Rutherford, 2011). Techniques that have been documented include administering substances that induce valsalva manoeuvres such as sneezing, gagging, vomiting, or blowing forcefully into a bottle to contract uterine muscles.

Current practices among Western Highland communities of Guatemala that promote postpartum uterine involution and may prevent PPH have not been documented. An early investigation reported on the use of herbs, baths, and massage postpartum to restore both physical and spiritual 'balance' to the puerperal woman (Greenberg, 1982). Lang and Elkin (1997) discussed cultural practices of TBAs, including massage of the uterus and use of the traditional sauna-bath postpartum, but did not discuss perceived benefits of these practices. TBAs believed that bleeding was not a postpartum complication and therefore did not necessitate treatment. Several traditional midwives commented that bleeding was a way to cleanse the body of 'bad blood' and "women don't die from it" (Lang and Elkin, 1997). p. 28

A qualitative study conducted with TBAs in San Miguel Ixtahuacán, Guatemala found that traditional midwives believed it appropriate to refer women to the hospital when there is prolonged bleeding postpartum. However, most TBAs admitted