

Management of Women in Labor in a Referral Hospital in Phnom Penh, Cambodia: A Case Discussion Study

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Abstract

Background: In Cambodia, there has been a recent change in the location of births from home to healthcare facilities. Many women and their families now request interventions such as augmentation of labor and operative delivery. Our aim was to identify factors leading to this situation.

Methods: We held a series of discussions on 7 cases with 3-6 midwives and 2-3 doctors present each time at a referral hospital in Phnom Penh. Cases chosen for discussion were "grey" cases (neither normal nor abnormal deliveries).

Results: Our case discussions showed that women tended to be admitted early and that the time of onset of labor was often unclear.

Conclusions: The case discussions reinforced the importance of recording information carefully and the basic, but essential, midwifery skills for determining the time of onset of labor and effective uterine contractions.

Keywords: Midwifery skills; Onset of labor; Cambodia

Background

In Cambodia, deliveries conducted by skilled birth attendants have increased from 19% in 2002 to 71% in 2011. The percentage of deliveries occurring in healthcare facilities has increased rapidly from 8% in 2002 and 18% in 2006 to 61% in 2011 [1]. The change in the location of births from home to healthcare facilities is most apparent in the cities. Although Cambodia is still regarded as a low-income country, the gross national income per capita was US \$810 in 2011, and there is economic growth in cities such as Phnom Penh [2].

Midwives are the main workforce dealing with reproductive, maternal, and newborn care in these healthcare facilities. Their work includes basic emergency obstetric care as defined in the standard package of activities for each level of facility [3]. The National Maternal and Child Center (NMCHC) was constructed with official development aid from Japan. It opened in April 1997 and is one of the top referral hospitals for perinatal care in Cambodia. NMCHC is 150-bedded hospital with 7000 deliveries per year. Although the number of deliveries per year has not changed for almost 15 years, the number of the caesarean sections has increased annually from 340 in 1997 to 1898 in 2012. The referral rate from the province was 40% in 2012. As well as being a top maternal referral hospital, NMCHC also provides in-service training for nurses, midwives, and doctors in all fields of reproductive health. In NMCHC, all emergency patients, including women in labor, are seen by the doctors, and care is provided by nurses and midwives. Normal vaginal deliveries are conducted mostly by midwives, and doctors are called only when there are any abnormalities (such as cases of prolonged labor, fetal distress, or eclampsia/pre-eclampsia, which may need medication, vacuum extraction, or caesarean section). To cope with the increasing number of high risk deliveries which are referred from the hospitals and clinics in Phnom Penh and also health centers and hospitals in surrounded provinces with limited staffing, there is an urgent need to improve the standard of midwifery for managing deliveries safely and providing maximum satisfaction to mothers and their families.

Methods

We began case discussion meetings in December 2012. The topic of

the case discussions was "grey" cases (those classified as being neither a normal delivery nor an abnormal delivery as defined earlier) managed in daily clinical work. By June 2013, 7 cases had been discussed: 5 cases of prolonged labor, 1 case of Premature Rupture of the Membranes (PROM), and 1 case of pre-eclampsia. All the discussions were undertaken by Khmer and Japanese experts together with Khmer-English translators. Each case discussion lasted approximately 1 h with staff midwives and doctors attending. The meetings were led by a senior doctor from the training unit of NMCHC. The number of attendees was different in each session (2-3 doctors and 3-6 midwives).

Results

Details of the 7 cases and discussion points are shown in Table 1. The time of onset of delivery was noted in 2 cases, but it was not noted in the other 5 cases. The mean delivery time after admission was 26.4 h (range, 4.4-55.6 h; median, 23.9 h), and the mean time to start of augmentation was 15.0 h (range, 3.0-23.8 h; median, 18.0 h) after admission. The mean Apgar score was 6.8 at 1 min and 8 at 5 min. In 2 cases of caesarean section, the Apgar scores were not recorded, but the babies were noted as being in good condition. Among the 5 patients with prolonged labor, 2 required caesarean section and 3 delivered vaginally. The common points of discussion were the time of onset of labor and the method used to determine effective contractions. The 1 patient with PROM delivered vaginally after oxytocin augmentation: the discussion points were how long to wait for commencement of labor

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	Age (years)	Gravida/Para	Admission time after the onset of labor (h)	Status on admission	Delivery time after admission (h:min)	Weight of the baby (g)	Apgar Score (1min/5min)	Start of augmentation after the admission (h)	Remarks
Case1	42	2/0	14:45	Cervix 1 cm Station high Contraction 2times/10min, 20s duration FHB148bpm	38:15	3500	Not mentioned	23:25	Oxytocin started 23:25 h after the admission (cervix was 1cm) and stopped once after 6h(cervix was 1cm) Oxytocin restarted 10h after the initial augmentation (cervix was 6cm and after the membrane ruptured) Cesarean section was decided 37:15 h after admission (cervix was 8cm and head was not engaged)
Case2	25	1/0	Unclear	Cervix 1cm Contraction 2times/10min, 20s duration FHB148bpm	9:10	3300	7/9	6:50	Referral case from a nearby province Oxytocin was started 6:50 h after the admission (cervix was 8cm)
Case3	26	2/0	Unclear	Cervix tip of the finger Contraction slight FHB140bpm	13:10	2380	7/8	No	Woman and family requested for augmentation strongly, but the midwife calmed them down
Case4	29	1/0	Unclear	Cervix tip of the finger Station high Contraction slight FHB140bpm	55:35	3500	Not mentioned	No	Cesarean section was decided 55:20 h after the admission (cervix was 4cm and swollen, head was not engaged)
Case5	24	1/0	Unclear	Cervix 1cm Leaking clear amniotic fluid Contraction slight FHB150bpm	23:55	2700	6/7 (8 at 10 min)	18:00	It was not clear when the leakage from membranes started Oral antibiotics were prescribed on admission Oxytocin was started 18:00 h after the admission (cervix was 3cm and amniotic fluid was turbid)
Case6	29	3/2	Unclear	Cervix tip of the finger Station high Contractions slight FHB152bpm	40:05	3000	7/8	23:50	Cytotec was started 6 hourly according to the Cambodian protocol (cervix was tip of finger and only very slight contractions)
Case7	22	1/0	9:00	BP180/100mmHg Urine protein(++) Cervix 4cm Contractions every 3 min, 30s duration FHB145bpm	4:25	3035	7/8	3:00	Just after admission, hydralazine intravenous drip started and MgSO ₄ added 1h after admission Fetal tachycardia (FHB170–180 bpm) was observed for approximately 15min at 2h after admission (cervix was 7cm). Oxytocin started 3h after the admission (cervix was 7cm) after reassurance on the fetal status.

bpm, beats per min; FHB, fetal heart beat.

Table 1: Details of the 7 cases.

and how to measure the effectiveness of contractions. The 1 patient with pre-eclampsia delivered vaginally, and the point of discussion was how to monitor the condition of the mother and baby.

Discussion

In Cambodia, a change in the place of delivery was initiated by political will using a delivery payment incentive (US\$10-15 per live birth) at hospitals and health centers in 2007 [3]. This trend was augmented by economic growth. The maternal mortality rate in Cambodia declined from 437 per 100,000 live births in 2000 to 206 per 100,000 live births in 2010 [3]. However, there are relatively few midwives caring for women who deliver in public healthcare facilities.

We reviewed only 7 cases, and the discussion was performed at the referral hospital in the capital Phnom Penh, which may not reflect the pregnancy and childbirth situation across the whole of Cambodia. However, the points of discussion reflected broad difficulties and problems in the provision of childbirth services in Cambodia.

The time of onset of labor was noted in only 2 of 7 women, suggesting that the timing of admission was too early. The timing of onset of labor is initially subjective. The definition of the latent phase of labor is debatable, but there is agreement that women in labor enter

the active phase when cervical dilatation is 3-4 cm [4]. The NMCHC is not designed as a maternity waiting facility; all women are admitted to the maternity ward through the emergency room if not in the active phase of labor. Staffing limitations make it difficult for midwives to provide continuous labor support in the NMCHC; midwives explain to the family how to provide support during labor in order to increase a woman's satisfaction with the childbearing experience [5]. However, this situation often results in women and their families requesting a caesarean section or augmentation if the waiting time in the maternity ward is prolonged. The midwives always try to support women during labor.

Furthermore, it became clear that our patient records did not provide sufficient information about each case. Recording notes is an essential task for health professionals. Without these notes, it is not possible to assess the condition of women in labor and share this information with colleagues. The case discussions highlighted the importance of recording medical details even when busy. Since NMCHC provides in-service training for nurses, midwives, and doctors as a national center, the Department of Nursing at NMCHC has been strengthening the nursing process with the intention of spreading good practices throughout the country. Through these case discussions, all

participants recognized the importance of patient records for assessing the progress of labor.

The noting and recording of “onset of labor” and “effective uterine contractions” are basic but essential midwifery skills. “Grey” cases are common. Physicians and midwives should therefore monitor their daily clinical practices closely. Through these case discussions, we were able to reflect on our tasks as caregivers for women in labor.

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