

# The Promotion of Exclusive Breastfeeding in Infants with Complete Cleft Lip and Palate during the First 6 Months after Childbirth at Srinagarind Hospital, Khon Kaen Province, Thailand

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**Background:** Breastfeeding is especially important for infants with cleft lip and/or cleft palate because it helps prevent nasal septum irritation, decreases the number of ear infections, and provides a sort of psychologically support for the postpartum mothers. It is difficult for a baby born with a cleft lip and/or cleft palate to suck milk out of the breast or bottle.

**Objective:** This study aimed to 1) promote exclusive breast-feeding in infants with CL-CP during their first 6 months after delivery and 2) examine risk factors related to the success of exclusive breastfeeding.

**Material and Method:** A counseling session provided by a special trained nurse is arranged for the parents of these infants as the earliest after birth. The mothers were advised that the best breastfeeding position either cross cradle or football position. The mothers were instructed to support their breasts with four fingers underneath and press their thumb on top to squeeze breast milk to help the babies with CL-CP get enough milk. The breast squeezing should be related to baby's sucking, swallowing and breathing rhythm. The infant weight gain after birth, their comfort, 6-8 urine per day, and 1 - 2 stool per day were used as the indications of breastfeeding success.

**Results:** Twenty infants were included in this study. A follow up after hospital discharge was set at 1 week 1, 2, 3, 4 and 6 months to provide continuously breastfeeding support for the mothers. After the 6-month period, we found that 2 infants were exclusively breastfed for 6 months and continued to have breast milk until 15 and 18 months of age, 2 infants had breastfeed for less than 2 months, and 16 infants for 3-4 months. Employment status played an important factor for the breastfeeding success among the mothers of CL-CP infants. The only 2 mothers able to provide 6 months exclusive breastfeeding did not work while the mothers who could not continue their breastfeeding reported that they felt very exhausted having to go to work and breastfeed their babies when they returned back home.

**Conclusion:** This study revealed that exclusive breastfeeding for CL-CP infants can be achieved when the relationship between infants, parents and their families were established.

**Keywords:** Exclusive Breastfeeding, Infants with Complete Cleft Lip and Palate

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Prior to the year 2000, newborns with cleft lip and/or cleft palate (CL-CP) at Srinagarind Hospital were immediately separated from their mothers in order to be cared for in a semi-intensive care unit. The newborns

were fed through a nasogastric (NG) tube since breastfeeding was not possible. However, NG tube feedings can cause serious complications, such as excessive secretions due to friction between the tube and the esophagus-upper respiratory tract, the newborn's inability to suckle and swallow after weaning from the tube, and frequent infections. Importantly, prolonged separation could generate negative parent-newborn relationships, causing rejection and neglect of the newborn and non-adherence to the doctor

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appointments from feeling shame of having a newborn with CL-CP.

In 2000, the Srinagarind Hospital nursing team adopted a policy that promotes maternal-newborn relationship. Rooming in is used with all newborns with CL-CP. The mother of the newborn is instructed to hold and breastfeed her baby right after childbirth, using the football holding semi-sitting or cross-cradle sitting position. While breastfeeding, the mother is taught to support her breast with four fingers underneath and the thumb pressing on top to encourage the milk flow. The mother uses the other hand to support her baby's neck and head, holding the baby closely to her breast, allowing the baby's mouth to cover the whole areola. This helps to promote an appropriate latch on. When the production of mature milk increases, the newborn is able to suckle without choking. In general, the newborn with CL-CP suckles ineffectively due to the anatomical problems. This results in inadequate milk production and consumption. Nevertheless, with the mother using the appropriate breastfeeding technique, the newborn can get enough milk. To squeeze her breast properly, the mother needs to do it in tandem with the newborn's suckling, swallowing, and breathing patterns. Based on these practices, the newborn with CL-CP can be exclusively breastfed with normal growth and development. The parent-child relationship is positive. Our multidisciplinary team has adopted this practice since 2000.

A literature review showed that only one study has been reported regarding breastfeeding among newborns with CL-CP. Kogo (1997) introduced an artificial palate to 10 newborns with CL-CP and reported that 6 out of the 10 newborns could be breastfed successfully<sup>(1)</sup>. However, these newborns were supplemented by the formula due to their ineffective suckling.

Our research team examined Srinagarind Hospital's January 1-October 30, 2000 statistic records and found that 14 newborns with complete CL-CP were transferred to Srinagarind Hospital. All of these 14 infants came with an NG tube and were admitted with their mothers to the 2B postpartum unit. On the unit, the mothers were instructed in the breastfeeding technique by experienced unit registered nurses (RNs). Our breastfeeding success rate was 100%. Our telephone follow-ups showed that 4 infants were exclusively breastfed for at least 4 months with normal weight and development, using Thailand Department of Health's indicators. Based on our extensive literature review, this was the first occasion which successfully

demonstrated exclusive breastfeeding among infants with complete CL-CP. Our innovative approach helps mothers whose infants are born with complete CL-CP to breastfeed their infants in a timely and appropriate manner which, in turn, helps promoting positive parent-infant relationship, enables the newborn to have normal growth and development and encourages the parents to adhere to follow up appointments.

Such success had motivated our research team to look at a new group of infants with complete CL-CP. This time, our objectives were to examine:

1. Rate of exclusive breastfeeding until 6 months after the newborns' hospitalization.
2. Factors that facilitate and hinder exclusive breastfeeding.

The goal of this study was to generate and disseminate a new body of knowledge and new practices regarding exclusive breastfeeding in infants with complete CL-CP.

#### **Materials and Methods**

This present study was conducted in newborns with complete CL-CP admitted at the 2B postpartum unit at Srinagarind Hospital, Faculty of Medicine, Khon Kaen University. The newborn was either born at the hospital or transferred from another health care setting between January 1, 2008 and December 31, 2009. The newborn's hospital physical records and the mother's breastfeeding records were examined to retrieve relevant data. Later, the mother was interviewed or contact via telephone call to learn about their breastfeeding practices and their newborns perceptions.

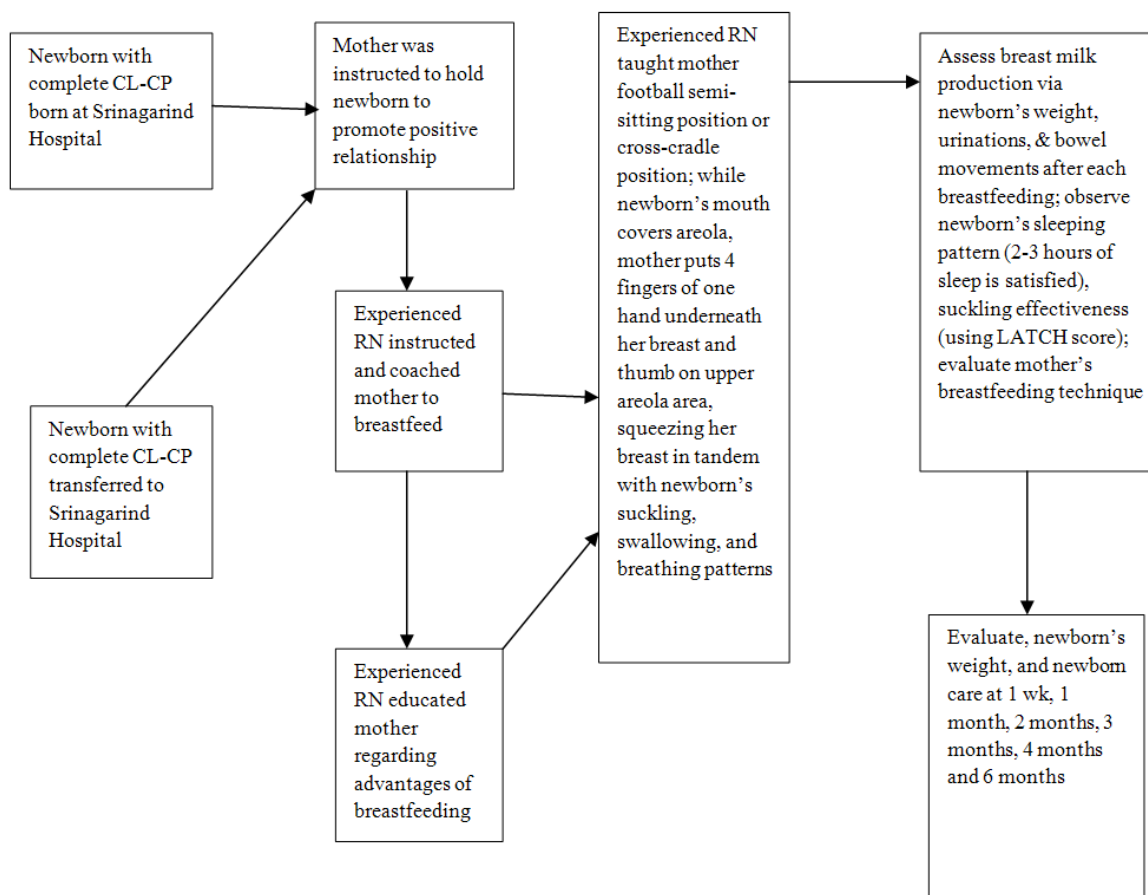
The protocol of this study has been reviewed and approved by the Ethics Committee of Khon Kaen University, based on the Declaration of Helsinki and written informed consent was obtained for each patient.

#### ***The inclusion criteria***

A newborn was recruited if the mother agreed to participate and the newborn reached all of the following criterias:

1. Born with complete CL-CP
2. Had no major complications during hospitalization
3. Could be followed up (mother could be contacted via telephone and could bring her baby to doctor appointments)
4. Was full-term and stay with mother from admission through discharge
5. Was exclusively breastfed

### The study protocol from admission through discharge



### Techniques

For successful exclusive breastfeeding:

1. An experienced RN initially educated the mother regarding advantages of breastfeeding, especially for newborns with complete CL-CP. The RN instructed the mother how to: hold her baby, support and squeeze her breast, and assist her baby to latch on.

2. Holding the newborn properly is very important. during, The mother should use the upright foot ball position or upright cross cradle position breastfeeding her newborn. The newborn's head should be upright in a sitting position. A small pillow is usually needed to support the mother's arm (Fig. 1-2).

3. While breastfeeding, the mother needs to support her breast by using the C-Hold, U-Hold, or Dancer Hand position with 4 fingers underneath the breast, pressing the thumb on the upper areola area to help straightening the nipple. When the newborn opens her mouth widely, the nipple should be inserted in the

newborn's mouth as deeply as possible and should be on top of the newborn's tongue. The mother then pushes the other hand that supports the newborn's head and neck closely to her breast, using part of the mother's breast to seal any gap due to the newborn's abnormal lip and palate anatomy (Fig. 3-4).

4. The mother needs to pump her milk immediately on the first day after delivery. While the mother is practicing squeezing her breast, the baby is practicing her suckling. The mother should squeeze her breast when the newborn starts to move the tongue to suckle and should let out of her breast when the newborn is swallowing and breathing in. The steps run in a repetitive cycle. To squeeze her breast effectively, the mother needs to press her breast firmly by using the thumb and forefinger. Milking the nipple is not recommended since it will make the nipple shorter and harder for the newborn to latch on. Also, the mother needs to hold the baby's neck and head firmly so that the nipple can be fixed in the newborn's mouth (Fig. 5)



**Fig. 1** The newborn's head should be upright in a sitting position. A small pillow is usually needed to support the mother's arm



**Fig. 2** The newborn's head should be upright in a sitting position. A small pillow is usually needed to support the mother's arm



**Fig. 3** The mother then pushes the other hand that supports the newborn's head and neck closely to her breast, using part of the mother's breast to seal any gap due to the newborn's abnormal lip and palate anatomy.



**Fig. 4** The mother then pushes the other hand that supports the newborn's head and neck closely to her breast, using part of the mother's breast to seal any gap due to the newborn's abnormal lip and palate anatomy.

5. The LATCH score was used to evaluate the newborn's suckling. The newborn was weighted daily. Urinations and bowel movements were recorded. The duration and interval of breastfeeding were noted.

6. The RN, who educated and coached the mother to breastfeed until the mother felt confident to

do by herself, was a lactation specialist. An inexperienced RN might caused maternal frustration and anxiety, resulting in unsuccessful breastfeeding.

7. Besides receiving childcare education provided for all mothers in the unit, the mother of newborn with complete CL-CP received one-on-one education from the RN.

8. Privacy was also provided for the mother,



**Fig. 5** The mother needs to pump her milk

her child with CL-CP, and the family.

### Results

At the hospital, all of the 20 newborns with complete CL-CP were successfully breastfed with no problems (e.g., choking). Their weight gain was found to be in a normal range. They were discharged with their mothers by the first week of hospitalization. At 1<sup>st</sup> week and 1<sup>st</sup> month after the discharge, all of the 20 newborns were exclusively breastfed with normal weight gain. When they were few months old, 18 newborns were still exclusively breastfed. Two other newborns received the formula since their mothers needed to go back to work. At 3-4 months, most of the newborns (n = 16) received the formula via bottle feeding for the same reason. At this point, all of the 20 newborns underwent surgery to fix their upper lip. At 6 months after the cleft palate was fixed (at 4.5 months), only 2 newborns were still breastfed in combination with the formula. These 2 newborns were healthy with normal body weight and development.

During hospitalization, all of the 20 newborns' parents intended to exclusively breastfeed their newborns for at least 6 months. The relationship between the parents and the newborn was found to be positive due to breastfeeding. The parents seemed to accept their newborn's problems well. They asked questions about treatments of CL-PL. All of the mothers stated that breastfeeding changed their perceptions toward their children from negative to positive. They stated that they did not think their newborns were different from other newborns without

CL-CP. They also reported that they felt confident that their newborns would look fine from surgical procedures. They were not ashamed of having a newborn with CL-CP and felt confident to care of their child. Furthermore, all of the mothers shared with the research team that they felt very proud as a mother who did what they were supposed to do (breastfeeding) for their newborn.

### At 6 months follow-up

From our assessment, we believe that introducing bottle feeding after artificial palate surgery caused nipple confusion among our studied newborns. Also, noticing that their babies could be bottle-fed had motivated some mothers to think about going back to work and had caused some of them to stop breastfeeding. Feeding the newborn by a dropper postoperatively also prompted some mothers to stop breast feeding in order that they could return to work since they experienced financial hardship from having only their husband as the bread winner.

The two mothers who exclusively breastfed their newborns until at least 6 months shared that a major factor in their success was their joining in a group whose members were new mothers and whose goal was to support exclusive breastfeeding. Both mothers stated that the members of the group were friendly and good role models. In addition, probably the best facilitator was spousal support. Both mothers reported that their spouses were very supportive of breastfeeding. Their spouses encouraged them to stay home to breastfeed the baby since these families did not encounter financial problems.

### Conclusion

Exclusive breastfeeding can be done successfully in newborn with complete CL-CP when an experienced nurse educates and coaches the mother to breastfeed in the early postpartum period. To assess the newborn's milk consumption, newborn weight gain, urinations, and bowel movements need to be noted. The newborn benefits tremendously from successful breastfeeding. A positive parent-newborn relationship is generated. The newborn can grow and develop normally. Breastfeeding can help the mother to feel strongly attached to her newborn and to change her perception toward the newborn from negative to positive, leading to adherence to follow ups with treatment instructions. This aspect is crucial since at least 15 years is needed to appropriately care and treatment of a child with complete CL-CP. Without

appropriate attachment and love from the parents, a newborn with complete CL-CP could end up with less than optimal physical and psychological outcomes throughout their life.

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**การส่งเสริมการเลี้ยงลูกที่มีภาวะปากแหว่งเพดานโหว่ด้วยนมแม่อย่างเดียวนในช่วง 6 เดือนแรก  
หลังคลอดในทารกที่มารับการฝึกให้นมแม่ในหอผู้ป่วยหลังคลอด (2ข.) โรงพยาบาลศรีนครินทร์  
จังหวัดขอนแก่น**

**พรเพ็ญ ปทุมวิวัฒนา, สุจิตา ทองสุขโข, ธาธิณี นราธิปกร, สุธีรา ประดับวงษ์, กุสุมา ชูศิลป์**

**ภูมิหลัง:** การส่งเสริมการเลี้ยงลูกด้วยนมแม่ในทารกที่มีภาวะปากแหว่งและเพดานโหว่ชนิดสมบูรณ์มีความสำคัญเนื่องจากน้ำนมแม่ช่วยป้องกันการเกิดภาวะอหิวาต์ในโพรงจมูกลดการเกิดภาวะหูชั้นกลางอักเสบและที่สำคัญสามารถช่วยสร้างสัมพันธ์ภาพระหว่างแม่และลูก ทำให้มารดา เกิดการยอมรับทารกที่มีความพิการได้ง่าย แต่ การให้ทารกปากแหว่งเพดานโหว่ชนิดสมบูรณ์ดูนมจากเต้าและดูดจากขวดเป็นเรื่องที่ลำบากและเกิดขึ้นได้ยากเนื่องจากทารกเหล่านี้จะมีปัญหาเรื่องการดูดและกลืนดังนั้นจำเป็นจะต้องใช้เทคนิคพิเศษเพื่อให้เกิดผลสำเร็จ

**วัตถุประสงค์:** เพื่อส่งเสริมสนับสนุนให้ทารกที่มีภาวะปากแหว่งและเพดานโหว่ชนิดสมบูรณ์สามารถดูดนมแม่จากเต้าได้โดยตรงตั้งแต่แรกเกิดถึง 6 เดือน และศึกษาปัจจัยที่ทำให้มารดาไม่สามารถให้ทารกที่มีภาวะปากแหว่ง และเพดานโหว่ชนิดสมบูรณ์ดูนมจากเต้าได้โดยตรง

**วัสดุและวิธีการ:** หลังคลอดมารดาควรได้รับคำแนะนำจากพยาบาลชำนาญการโดยเร็วที่สุดตั้งแต่แรกคลอดเรื่องความจำเป็นที่ทารกจะได้รับการโอบกอดและได้รับการดูนมแม่ โดยในระยะแรกพยาบาลชำนาญการพิเศษจะต้องแนะนำและเข้าช่วยเหลือให้แม่ทราบวิธีให้ลูกดูนมแม่ตั้งแต่เริ่มแรก ในเรื่องท่าอุ้ม วิธีการประคองเต้านม วิธีการทำให้ทารกอ้าปากกว้าง โดยเอาหัวนมวางบนริมฝีปากกระตุ้นให้ทารกอ้าปากให้กว้างจึงวางหัวนมไว้บนลิ้นทารกให้ลึกที่สุด เมื่อทารกอมหัวนมได้มิดลานนม มือที่อยู่เหนือลานนมให้บีบและคลายเป็นจังหวะและรอให้ทารกพักหายใจ เมื่อทารกเริ่มขยับลิ้นให้แม่บีบนิ้วชี้และนิ้วหัวแม่มือเข้าหากัน มือด้านที่ประคองศีรษะทารกจะต้องโอบกระชับเข้าหาเต้านมเพื่อให้ริมฝีปากทารกกระชับกับเต้านมการบีบน้านมเป็น จังหวะจะช่วยให้ทารกได้รับน้ำนมอย่างเพียงพอ

**ผลการศึกษา:** พบว่ากลุ่มตัวอย่างจำนวน 20 ราย ขณะอยู่โรงพยาบาลสามารถดูนมแม่จากเต้าได้สำเร็จทุกรายโดยน้ำหนักอยู่ในเกณฑ์ปกติ น้ำหนักลดไม่เกินร้อยละ 10 ของน้ำหนักแรกคลอด และเมื่อติดตามหลังจำหน่าย 1 สัปดาห์ และ 1-6 เดือน เพื่อติดตามการให้นมแม่พบว่า มีทารก 2 รายที่ได้รับนมแม่อย่างเดียวนครบ 6 เดือนและมารดาสามารถเลี้ยงลูกด้วยนมแม่ต่อเนื่องจนทารกอายุ 15-18 เดือน และมีทารก 2 รายที่ให้นมแม่ถึง 2 เดือน

อีก 16 รายให้นาน 3-4 เดือน ปัจจัยที่ทำให้หยุดให้นมแม่คือ ปัญหาทางด้านเศรษฐกิจทำให้แม่ต้องกลับไปทำงาน

**สรุป:** ทารกที่มีภาวะปากแหว่งและเพดานโหว่ชนิดสมบูรณ์ สามารถดูนมจากเต้านมแม่โดยตรงได้สำเร็จโดยต้องใช้เทคนิคการปรับท่าอุ้มและปรับการประคองเต้านมให้พร้อมในการช่วยบีบน้านมเพื่อให้ ทารกได้ รับน้ำนมเพียงพอและการส่งเสริมให้ทารกปากแหว่งเพดานโหว่ ดูนมแม่ จากเต้านมแม่ โดยตรงทำให้มารดาและครอบครัวยอมรับทารกได้ง่าย และยังทำให้มารดาอดทนต่อการรักษาผ่าตัดทารกที่ต้องใช้ระยะ เวลาอันยาวนานได้

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