

# Effect of Early Skin-to-Skin Contact to Breast Milk Volume and Breastfeeding Jaundice at 48 Hours after Delivery

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**Objective:** To evaluate effect of maternal-infant skin-to-skin contact in the first hour postbirth to breast milk volume and breastfeeding jaundice at 48 hours after delivery.

**Material and Method:** This was a prospective cohort study. The subjects were 133 postpartum women, who delivered without complications between October 2013 and July 2014 at MSMC and was allocated into early skin-to-skin contact (SSC) and control groups. In the SSC group, the newborns were placed prone on mothers' bare chest after finishing routine newborn care for at least 30 minutes. The breast milk volume were collected at 16-24 hours, 40-48 hours postpartum and before discharge. The infants' microbilirubins were measured at 48 hours postbirth. Demographic data including age, parity, GA at delivery, birth weight and gender of the newborns were collected. Data were analyzed using descriptive statistics, Chi-square test and t-test.

**Results:** The mean breast milk volume in the SSC group were  $5.68 \pm 5.46$ ,  $16.98 \pm 11.09$ , and  $31.44 \pm 20.06$  milliliters at 16-24 hours, 40-48 hours postpartum and before discharge, respectively, while the mean breast milk volume in the control group were  $6.19 \pm 5.77$ ,  $13.99 \pm 13.07$  and  $25.81 \pm 20.26$  milliliters, respectively in the same period of time, and no statistically difference of the breast milk volume was found between the two groups. The percentage of mothers who had the onset of lactation within 24 hours postpartum in the SSC group (95.51%, 85/89) was significantly higher than the control group (77.27%, 34/44,  $p < 0.01$ ). The percentages of breastfeeding jaundice cases were 16.85 in the SSC group and 27.27 in the control group, and had no significant difference.

**Conclusion:** Early skin-to-skin contact had no direct effect to breast milk volume and incidence of breastfeeding jaundice at 48 hours after delivery but related to the onset of lactation within 24 hours postpartum.

**Keywords:** Maternal-infant skin-to-skin contact, Breast milk volume, Breastfeeding jaundice

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Lactation is a natural process of almost all post-pregnancy female mammals that are necessary for their newborn survival<sup>(1)</sup>. The benefits of breast milk extend beyond just basic nutrition. In addition to containing all essential nutrients and vitamins, it's also rich of immune factors especially secretory IgA that protect the infants from severe infections and allergies. The initiation of successful breastfeeding should begin immediately after birth to stimulate the lactation cycle and provide optimal environment for the newborns to

begin breastfeeding behaviors, such as rooting, mouthing and suckling, in this sensitive period. The essential hormones of lactation are prolactin and oxytocin. Prolactin is responsible for milk production while oxytocin involves the milk ejection or letdown reflex. Both hormones are directly stimulated by infant suckling.

Early maternal-infant skin-to-skin contact (SSC) is the placing of the naked baby prone on the mother's bare chest at birth or soon afterwards<sup>(2,3)</sup>. Effect of early SSC is clearly identified including, increase duration of exclusive breastfeeding, better cardio-respiratory stability, improves temperature control and decrease infant crying without short- or long-term negative effect<sup>(2,4-7)</sup>. The early SSC also enhances good latch on and breastfeeding success at

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early postpartum period<sup>(5,8)</sup>. When a baby latches on and suckling well, the lactation cycle is established result in more milk production. Thus, the early SSC may have some effects to breast milk volume.

Breastfeeding jaundice, found in about one-tenth of infant with exclusive breastfeeding, mostly occurs in the first weeks after birth. The explanation is that breastfed infants receive fewer calories until the milk has “come in”, and the decrease in caloric intake is an important stimulus to increasing the enterohepatic circulation and cause unconjugated hyperbilirubinemia<sup>(9)</sup>. Successful breastfeeding decreases the risk of severe jaundice and is best monitor by infant weight, urine and stool outputs<sup>(10)</sup>. Therefore, early SSC that enhances breastfeeding success may eliminate the rate of breastfeeding jaundice.

The objectives of this study were to evaluate effect of maternal-infant skin-to-skin contact in the first hour after delivery to breast milk volume and incidence of breastfeeding jaundice at 48 hours after birth.

## Material and Method

### Study design

This study was prospective cohort study, conducted at delivery room and postpartum ward of the HRH Princess Maha Chakri Sririndhorn Medical Center (MSMC). The protocol was approved by the ethical committee, Faculty of medicine, Srinakarinwirot University (SWUEC-028/56E, TCTR20160417001). All attendants gave written and informed consent prior to study participation. For subjects aged under eighteen, parental informed consents were also obtained.

### Sample size and study population

The sample size was calculated using alpha error = 0.05, power = 0.85, and estimated of medium effect size that equaled 0.5. The total subjects needed was 132 (allocation ratio = 2:1, 88 in the SSC group and 44 in the control group) and was randomly allocated into two groups at the labor room by opportunity sampling technique. The inclusion criteria were term singleton pregnant women age 16-40 years who undergone vaginal delivery without complications at MSMC between October 2013 and July 2014. The newborn must have the birth-weight more than 2,500 grams and no other contraindication for breastfeeding. The exclusion criteria were the pregnant women who had breast milk prior to delivery, the mother who cannot proceed breastfeeding due to physical problems, and the newborns who had some conditions that needed to be separated from their mothers.

### Study protocol and data collection

Demographic data were collected including age, parity, gestational age at delivery, birth weight and gender of the newborns. All of the subjects received standard care in labor room. In the control group that was currently routine practice, the newborns were shown to their mother immediately after delivery, then placed under a radiant warmer for routine newborn care, including drying, suctioning the secretion, vital sign and weight measurements and brief physical examination. After 2 hours of postpartum observation, the healthy newborns were transferred to postpartum ward with their mother and begin breastfeeding. In the intervention group, the naked newborns were placed prone on mothers' bare chest after finishing routine newborn care that usually take about 10-20 minutes. Their heads were covered with dry caps and warm blanket across their backs (Fig. 1). This method of early skin-to-skin contact was continued for at least 30 minutes in the labor room with closed care for safety of both mothers and their newly-born infants.

At postpartum ward, all the mothers were encouraged breastfeeding on demand, the newborns were staying with their mothers for 24 hours, or “rooming-in”, and no food or drink other than breast milk were given to the infants, unless medically indicated. The nurse team who were expert in breastfeeding advised about how to breastfeed effectively and supported when the problems occurred.



Fig. 1 Early skin-to-skin contact at immediate postpartum period.

The LATCH score was also evaluated. All the nurses that involved in this project were trained and understood the protocol before beginning of data collection. The breast milk was collected at 16-24 hours, 40-48 hours postpartum (2 times per period and the interval between 2-3 hours) and before discharge from hospital (49-72 hours postpartum) by the experienced nurses. The standard hospital-graded breast pumps or skilled manual expression were used to gather breast milk from the opposite side of breast that the mother nursing before until the breast were empty and recorded the quantity in milliliter. The collected breastmilk were later brought to the infants by cup-feeding. The microbilirubin levels were obtained at 48 hours postbirth as in standard practice. All of the newborns were assessed for neonatal jaundice by pediatricians, further investigations for the cause of hyperbilirubinemia and treatments proceeded in case of abnormally high microbillirubin. Breastfeeding jaundice was diagnosed when other causes of neonatal jaundice were excluded and inadequate breast milk volume. The infants' weights were also recorded before discharge to calculate the percentage of weight loss.

#### **Statistical analysis**

Only subjects with complete data were selected to analyze. Descriptive statistics were used for demographic characteristics, obstetric and delivery data, breast milk volume and microbilirubin level. The Kolmogorov-Smirnov was used to test normality of the data. The differences between the groups were calculated using t-test for continuous data and Chi-square test for categorical data. The significant level was considered at  $p < 0.05$ .

#### **Results**

A total of 165 mothers were enrolled in the study (108 in SSC group and 57 in control group). Thirty-two dyads (19 in SSC group and 13 in control group) were excluded due to prior milk expression, maternal postpartum hemorrhage, infants' birth weight under 2,500 grams and some conditions that the newborns was separated after delivery. The remaining 133 cases were included in the study. The demographic data of both groups were shown in Table 1 including maternal age, parity, gestational age at delivery, birth weight, sex of the newborn and LATCH score. There was no statistically difference between this two groups.

The details of breast milk volume, percentage of mothers who had onset of lactation within 24 hours postpartum, microbilirubin level, breastfeeding jaundice

and the percent of infant weight loss were shown in Table 2. There was no statistically difference of the mean breast milk volume between the two groups but had a trend toward significant at 40-48 hours postpartum period. The percentages of mothers who had the onset of lactation within 24 hours postpartum was 95.51 in the SSC group and 77.27 in the control group that was significant difference ( $p < 0.01$ ).

The mean microbilirubin were  $10.13 \pm 2.28$  and  $10.77 \pm 2.91$  mg/dL in the SSC and the control groups, respectively, and there was no statistically significance. The percentages of breastfeeding jaundice cases were 8.99 in the SSC group and 18.18 in the control group, and had no significant difference. Furthermore, we found that there was a relationship between the breastfeeding jaundice case and the onset of lactation (42.86%, 6/14 in the mothers who had the onset of lactation beyond 24 hours postpartum vs. 8.40%, 10/119 in the mothers who had the onset of lactation within 24 hours postpartum;  $p = 0.002$  by  $\chi^2$  test). The percent of infant weight loss was not different between the two groups.

#### **Discussion**

Although the results of this study showed no statistically significant effect of early SSC to the breast milk volume, there were a trend toward significant different breast milk volume between the 2 groups at 40-48 hours postpartum period. A recent Cochrane review demonstrated significant positive effects of early skin-to-skin contact on duration of breastfeeding at one to four months postbirth and the mothers tended to breastfeed longer but no study showed the effect of SSC to the breast milk volume in term newborns at early postpartum period<sup>(2)</sup>. Most of the literatures that studies the effect of SSC or kangaroo care (KC) to breast milk volume were done in population of preterm infant that admitted in NICU and have low birth weight<sup>(11-14)</sup>. Many early-postpartum mothers have concerns about the volume of their breast milk that it will be insufficient for the babies and requesting for formula milk supplementation is common. In the study by Santoro et al<sup>(15)</sup>, showed that the newborns ingested only  $15 \pm 11$  g of milk during the first 24 hours of life and our study demonstrated the mean breast milk volume per feed in the first day was 5 to 6 mL that would enough for the newly-born infants. However, in our study measured the mother's ability to produce milk, not the infant's ability to consume milk.

The lactogenesis stage II is the change from production of small volumes of colostrum to abundant

**Table 1.** Demographic data of the mothers and newborns in the early skin-to-skin contact and the control groups

Variable	SSC group (n = 89)	Control (n = 44)	p-value
Maternal age, year (mean $\pm$ SD)	26.88 $\pm$ 5.92	26.86 $\pm$ 6.35	0.991*
Primigravida, n (%)	32 (35.96)	17 (38.64)	0.454**
Multigravida, n (%)	57 (64.04)	27 (61.36)	
GA at delivery in days (mean $\pm$ SD)	271.55 $\pm$ 7.87	273.25 $\pm$ 7.36	0.233*
Birth weight, grams (mean $\pm$ SD)	3,061.24 $\pm$ 348.71	3,052.27 $\pm$ 311.33	0.885*
Gender of newborn			0.452**
Male, n (%)	40 (44.94)	21 (47.73)	
Female, n (%)	49 (55.06)	23 (52.27)	
LATCH score $\geq$ 8, n (%)	58 (65.17)	24 (54.54)	0.160**

\* t-test, \*\* Chi-square test

**Table 2.** Breast milk volume, percentage of mothers who had onset of lactation within 24 hours postpartum, microbilirubin level, breastfeeding jaundice and the infant weight loss

Variable	SSC group (n = 89)	Control (n = 44)	p-value
Breast milk volume, per feed (mL)			
16-24 hours postpartum (mean $\pm$ SD)	5.68 $\pm$ 5.46	6.19 $\pm$ 5.77	0.694*
40-48 hours postpartum (mean $\pm$ SD)	16.98 $\pm$ 11.09	13.99 $\pm$ 13.07	0.081*
Before discharge (mean $\pm$ SD)	31.44 $\pm$ 20.06	25.81 $\pm$ 20.26	0.132*
Onset of lactation in 24 hours postpartum; n (%)	85 (95.51)	34 (77.27)	0.002**
Microbilirubin, mg/dL (mean $\pm$ SD)	10.13 $\pm$ 2.28	10.77 $\pm$ 2.91	0.202*
Breastfeeding jaundice; n (%)	8 (8.99)	8 (18.18)	0.107**
Percent of infant weight loss (mean $\pm$ SD)	5.41 $\pm$ 2.17	5.11 $\pm$ 2.86	0.551*

\* t-test, \*\* Chi-square test

amounts of breast milk that generally begins by 30 to 48 hours following delivery in term mothers, due to a dramatic decrease in progesterone, removal of milk from the breast and maintenance of prolactin levels<sup>(12,16)</sup>. Delay in achievement of lactogenesis stage II is common in 22 to 31% of women entering this stage after 72 hours following delivery and has been associated with decreased success in later lactation in mothers of term infants<sup>(12)</sup>. In the study by Gubler et al<sup>(17)</sup>, found that the best conditions for successful early postpartum breastfeeding were delivery without anesthesia by a multiparous normal-weight mother, followed by immediate skin-to-skin contact, rooming-in for 24 hours per day, and dedicated nipple care. This study also showed the significant higher in the percentages of the mothers who had the onset of lactation within 24 hours postpartum of the early SSC group than the control group. Therefore, may imply that the mothers who have early SSC will have better

established early successful breastfeeding which consistent with the study by Gabriel et al<sup>(7)</sup>.

Physiologic jaundice occurs in infants because of increase rate of bilirubin production due to elevated hematocrit and a shorter life span of the red blood cells, and immature hepatic glucuronosyltransferase that involved in the conjugation of bilirubin and facilitates excretion from the body<sup>(10,18)</sup>. Breastfeeding jaundice is the most common cause of unconjugated hyperbilirubinemia. The explanation is caloric deprivation, leading to an increase in enterohepatic circulation<sup>(10)</sup>. Although, there were no statistically difference of the mean microbilirubin levels and the percentages of breastfeeding jaundice between the early SSC and control groups in our study, but we found a relationship between the breastfeeding jaundice cases and the onset of lactation. From this results may imply that the volume of breast milk is less important factors of

causing breastfeeding jaundice than the onset of lactation in the early postpartum period. Thus, early SSC may also eliminate the incidence of breastfeeding due to the overall faster onset of lactation.

Separation of mothers and their newborns at birth has become routine care in many hospitals in Thailand for many reasons such as, safety policies for both mothers and infants, limited healthcare personnel in labor room to take close care of postpartum mothers, and most importantly, no apparent breastfeeding guideline to implement into clinical practice. In a period of more than 10 years, the Ministry of Public Health had launched the Baby Friendly Hospital project, following the ten steps to successful breastfeeding of UNICEF<sup>(3,18)</sup>, to encourage the exclusive breastfeeding. The early SSC is part of step 4, "Help mothers initiate breastfeeding within half an hour of birth", thus our study will be implement and support this policy.

The advantage of this study was that it is the first research that demonstrated the effect of SSC to the breast milk volume in term newborns at early postpartum period. Although the results were no statistically significance, but the data can be used in future research and counseling the mothers, reassuring about the sufficient breast milk volume.

The limitation of this study was that we collected the breast milk volume only in the first 48-72 hours postpartum but the early skin-to-skin contact may have longer effect to the volume of breast milk. Further study may be done to collect breast milk volume in more period of time. Another limitation was about some uncontrollable factors affecting breast milk volume, e.g., maternal emotional stress, type and volume of maternal food ingestion, exact duration and frequency of infant suckling.

Future research should be done in the larger population and may focused on early skin-to-skin contact in the mothers who undergo cesarean delivery. Further review for establishment of protocol of early SSC that appropriate for clinical practice in both healthcare providers and patient safety is also valuable.

### **Conclusion**

Early skin-to-skin contact had no direct effect to breast milk volume and incidence of breastfeeding jaundice at 48 hours after delivery but related to the onset of lactation within 24 hours postpartum.

### **What is already known on this topic?**

There was significant positive effects of early skin-to-skin contact on duration of breastfeeding at

one to four months postbirth.

### **What this study adds?**

Early skin-to-skin contact had no direct effect to breast milk volume and incidence of breastfeeding jaundice but related to the onset of lactation within 24 hours postpartum.

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### **Potential conflicts of interest**

None.

### **References**

1. Capuco AV, Akers RM. The origin and evolution of lactation. *J Biol* 2009; 8: 37.
2. Moore ER, Anderson GC, Bergman N, Dowswell T. Early skin-to-skin contact for mothers and their healthy newborn infants. *Cochrane Database Syst Rev* 2012; (5): CD003519.
3. Entwistle FM. The evidence and rationale for the UNICEF UK baby friendly initiative standards. United Kingdom: UNICEF; 2013.
4. Suzuki S. Effect of early skin-to-skin contact on breast-feeding. *J Obstet Gynaecol* 2013; 33: 695-6.
5. Mahmood I, Jamal M, Khan N. Effect of mother-infant early skin-to-skin contact on breastfeeding status: a randomized controlled trial. *J Coll Physicians Surg Pak* 2011; 21: 601-5.
6. Mikiel-Kostyra K, Mazur J, Boltruszko I. Effect of early skin-to-skin contact after delivery on duration of breastfeeding: a prospective cohort study. *Acta Paediatr* 2002; 91: 1301-6.
7. Marin Gabriel MA, Llana M, I, Lopez EA, Fernandez VE, Romero B, I, Touza PP. Randomized controlled trial of early skin-to-skin contact: effects on the mother and the newborn. *Acta Paediatr* 2010; 99: 1630-4.
8. Moore ER, Anderson GC. Randomized controlled trial of very early mother-infant skin-to-skin contact and breastfeeding status. *J Midwifery Womens Health* 2007; 52: 116-25.
9. Maisels MJ. Neonatal jaundice. *Pediatr Rev* 2006; 27: 443-54.
10. Lauer BJ, Spector ND. Hyperbilirubinemia in the newborn. *Pediatr Rev* 2011; 32: 341-9.

11. Anderson GC, Chiu SH, Dombrowski MA, Swinth JY, Albert JM, Wada N. Mother-newborn contact in a randomized trial of kangaroo (skin-to-skin) care. *J Obstet Gynecol Neonatal Nurs* 2003; 32: 604-11.
12. Parker LA, Sullivan S, Krueger C, Kelechi T, Mueller M. Effect of early breast milk expression on milk volume and timing of lactogenesis stage II among mothers of very low birth weight infants: a pilot study. *J Perinatol* 2012; 32: 205-9.
13. Hurst NM, Valentine CJ, Renfro L, Burns P, Ferlic L. Skin-to-skin holding in the neonatal intensive care unit influences maternal milk volume. *J Perinatol* 1997; 17: 213-7.
14. Parker LA, Sullivan S, Krueger C, Kelechi T, Mueller M. Strategies to increase milk volume in mothers of VLBW infants. *MCN Am J Matern Child Nurs* 2013; 38: 385-90.
15. Santoro W Jr, Martinez FE, Ricco RG, Jorge SM. Colostrum ingested during the first day of life by exclusively breastfed healthy newborn infants. *J Pediatr* 2010; 156: 29-32.
16. Dewey KG, Nommsen-Rivers LA, Heinig MJ, Cohen RJ. Risk factors for suboptimal infant breastfeeding behavior, delayed onset of lactation, and excess neonatal weight loss. *Pediatrics* 2003; 112: 607-19.
17. Gubler T, Krahenmann F, Roos M, Zimmermann R, Ochsenbein-Kolble N. Determinants of successful breastfeeding initiation in healthy term singletons: a Swiss university hospital observational study. *J Perinat Med* 2013; 41: 331-9.
18. WHO/UNICEF. Ten steps to successful breastfeeding [Internet]. 1989 [cited 2016 Mar 18]. Available from: <http://www.unicef.org/newsline/tensteps.htm>

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ผลของการที่มารดาและทารกได้มีการสัมผัสเนื้อแนบเนื้อทันทีหลังคลอดกับปริมาณน้ำนมและภาวะตัวเหลืองที่เกิดจากการได้รับนมแม่ไม่เพียงพอในช่วง 48 ชั่วโมงหลังคลอด

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**วัตถุประสงค์:** เพื่อศึกษาผลของการที่มารดาและทารกได้มีการสัมผัสเนื้อแนบเนื้อทันทีหลังคลอดกับปริมาณน้ำนม และภาวะตัวเหลืองที่เกิดจากการได้รับนมแม่ไม่เพียงพอในช่วง 48 ชั่วโมงหลังคลอด

**วัตถุประสงค์และวิธีการ:** ศึกษาจากสตรีหลังคลอดที่ไม่มีภาวะแทรกซ้อนและทารกแรกเกิดที่โรงพยาบาลศูนย์การแพทย์สมเด็จพระรัตนราชสุตาภยบรมราชกุมารี ในช่วงเดือนตุลาคม พ.ศ. 2556 ถึง เดือนกรกฎาคม พ.ศ. 2557 จำนวนทั้งสิ้น 133 ราย แบ่งเป็น 2 กลุ่ม คือกลุ่มที่ได้รับและไม่ได้รับการสัมผัสเนื้อแนบเนื้อทันทีหลังคลอด โดยกลุ่มที่ได้รับการสัมผัสเนื้อแนบเนื้อทันทีหลังคลอด ทารกจะถูกจัดทำให้คว่ำบนหน้าอกมารดา หลังจากได้รับการดูแลหลังคลอดตามมาตรฐานแล้วเป็นเวลาอย่างน้อย 30 นาที จากนั้นปริมาณน้ำนมจะถูกเก็บที่ 16-24 ชั่วโมง, 40-48 ชั่วโมง และก่อนกลับบ้าน และวัดค่าไมโครบิลลิบูรินของทารกที่อายุ 48 ชั่วโมงหลังคลอด รวบรวมข้อมูลพื้นฐาน ได้แก่ อายุ, ลำดับครรภ์, อายุครรภ์เมื่อคลอด, น้ำหนักทารกแรกคลอด, เพศทารก รวมถึงคะแนนการเข้าเต้า ทำการวิเคราะห์ข้อมูลทางสถิติโดยไครยอลละ ค่าเฉลี่ยและส่วนเบี่ยงเบนมาตรฐานสำหรับข้อมูลเชิงพรรณนา และ Chi-square, t-test สำหรับเปรียบเทียบข้อมูล

**ผลการศึกษา:** ค่าเฉลี่ยและค่าเบี่ยงเบนมาตรฐานของปริมาณน้ำนมในกลุ่มที่ได้รับการสัมผัสเนื้อแนบเนื้อทันทีหลังคลอดเท่ากับ  $5.68 \pm 5.46$ ,  $16.98 \pm 11.09$  และ  $31.44 \pm 20.06$  มิลลิลิตร ในช่วง 16-24 ชั่วโมง, 40-48 ชั่วโมง และก่อนกลับบ้านตามลำดับ ในขณะที่กลุ่มที่ไม่ได้รับการสัมผัสเนื้อแนบเนื้อทันทีหลังคลอด มีค่าเฉลี่ยและค่าเบี่ยงเบนมาตรฐานของปริมาณน้ำนมเท่ากับ  $6.19 \pm 5.77$ ,  $13.99 \pm 13.07$  และ  $25.81 \pm 20.26$  มิลลิลิตรตามลำดับ ซึ่งไม่พบความแตกต่างอย่างมีนัยสำคัญทางสถิติ แต่พบว่าร้อยละของมารดาที่เริ่มมีน้ำนมมาใน 24 ชั่วโมงแรกหลังคลอด ในกลุ่มที่ได้รับการสัมผัสเนื้อแนบเนื้อทันทีหลังคลอด (95.51, 85/89) สูงกว่าในกลุ่มที่ไม่ได้รับการสัมผัสเนื้อแนบเนื้อทันทีหลังคลอดอย่างมีนัยสำคัญทางสถิติ (77.27, 34/44,  $p < 0.01$ ) ร้อยละของทารกที่มีภาวะเหลืองจากการได้รับนมแม่ไม่เพียงพอเท่ากับ 16.85 และ 27.27 ในกลุ่มที่ได้รับและไม่ได้รับการสัมผัสเนื้อแนบเนื้อทันทีหลังคลอดตามลำดับ ซึ่งไม่พบความแตกต่างอย่างมีนัยสำคัญทางสถิติ

**สรุป:** ไม่พบผลโดยตรงของการสัมผัสเนื้อแนบเนื้อทันทีหลังคลอดกับปริมาณน้ำนมและภาวะทารกตัวเหลืองจากการได้รับนมแม่ไม่เพียงพอในช่วง 48 ชั่วโมงหลังคลอด แต่พบว่ามีผลกับการมาของน้ำนมใน 24 ชั่วโมงแรกหลังคลอด

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