Prolactin Level and Breast milk Production among Mothers of Low Birth Weight Infants Admitted to Level II Neonatal Intensive Care Unit of the Philippine General Hospital who underwent Kangaroo Mother Care

BACKGROUND

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KANGAROO MOTHER CARE

Early skin to skin contact
Exclusive breastfeeding
Early discharge and follow up

BACKGROUND

- Vaz, 2012

  -Effects of breast milk volume with KMC versus conventional care

  -30 mother-infant dyads

  -KMC group had more milk volume compared with the conventional group (28mL vs 24.5mL, $p < 0.001$)

- Pallas-Alonso, 2012

  -Effects of breast milk volume with KMC versus conventional care

  -36 mothers with LBW infants

  -No significant difference

OBJECTIVES

- To determine if Kangaroo Mother Care will result to increased prolactin level and breastmilk production among mothers

1. To determine the prolactin levels of mothers who rendered Kangaroo Mother Care compared to control on the 3rd and 7th day post-partum.

2. To measure the milk volume of mothers who rendered Kangaroo Mother Care compared to control on the 3rd and 7th day post-partum.

METHODOLOGY

INCLUSION

- Weight of ≤ 2000g
- Apgar score ≥ 7 at 5 minutes of life.

EXCLUSION

- Unstable infants
- mothers who are clinically unstable who cannot render KMC
- mothers who have contraindication for breastfeeding
- mothers diagnosed with Prolactinoma

METHODOLOGY

Mother-Baby Dyad

KMC group

Rendered KMC at least 4 hrs/day for 7 days

Control group

Given routine care

METHODOLOGY

Breast milk collection
Done 3 consecutive times
every 3 hours

Day 7

- Serum prolactin extraction
- Breast milk extraction

STATISTICAL ANALYSIS

- 25 subjects for each the control and treatment arm was calculated to achieve a power of 80% and an alpha error of 0.05

- Statistics used: student's T-test, Pearson Chi-square

TABLE 1.0 Baseline Characterisrics

Characteristics	KMC (n=25)	Control (n=25)	p value
Maternal Age, mean (SD), years	27.6 (±7.8)	28.2 (±6.6)	0.378
Maturity Aging, mean (SD), weeks	34.4 (± 1.8)	34.1 (±2.2)	0.265
Mode of delivery			
Vaginal delivery	17	11	
Abdominal delivery	8	14	
Maternal Factors, frequency			
Infection	11	11	
Hypertension	8	9	
Diabetes Mellitus	4	0	
Bronchial Asthma	2	2	
SLE	0	1	
Thyroid Disease	1	0	
Neonatal Factors			
Gender, n (%), male	9 (36)	10 (40)	
Weight, mean (SD),grams	1796 (±218)	1762 (± 233)	

TABLE 2.0 Observed Outcomes

	KMC (n=25)	Control (n=25)	p-value (95% CI)
Milk volume			
Third day post-partum, mean (SD), mL	29.6 (±27.8)	16.3 (±26.1)	0.043
Seventh day post-partum, mean (SD), mL	72.4 (±62.3)	47.3 (±43.8)	0.002
P value	0.002	0.002	
Serum prolactin levels			
Third day post-partum, mean (SD), mIU/L	5244.0 (±2702.1)	4129.2 (±2485.3)	0.070
Seventh day post-partum, mean (SD), mIU/L	4968.8 (±2425.8)	3705.4 (±2731.4)	0.063
P value	0.355	0.288	
Day of First Successful Latch, mean (SD), days	3.7 (±2.2)	4.1 (±1.5)	0.248

DISCUSSION

Factors affecting prolactin secretion:

- **Skin to skin contact**
- **Emotional state of the mother**
- **Infant's presence**

CONCLUSION

Kangaroo Mother Care

- ↑ **Maternal Serum Prolactin**
- ↑ **Breast milk production**

RECOMMENDATION

- Larger sample size
- Use surrogate clinical outcomes for indirect measurement of milk volume
- Other physiologic studies on KMC

Thank you