

Does Cord Clamp Affect the Proper Positioning of Breastfeeding?

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To determine the appropriateness of breastfeeding position as assessed by 4-point standard objective criteria in the presence of commercial plastic cord clamp. 50 babies each with and without cord clamp were selected randomly in post-natal ward. Mean gestational age in both the periods was comparable (39 ± 1.13 and 39 ± 1.34 weeks). On evaluation by the standard 4 points of proper positioning, babies with cord clamp failed to keep their head and body straight (66% vs 94%, $P=0.001$), keep their baby's body touching mothers abdomen (16% vs 94% $P=0.000$), and body well supported (72% vs 96%, $P=0.002$). However, both groups were appropriately able to turn baby's body towards mother and nose opposite the nipple (98% vs 88%, $P=0.112$). On evaluation of mother's satisfaction score, there was no significant difference except in the mother's concern about care of cord clamp ($P<0.001$).

Key words: Attachment, Breastfeeding, Cord clamp, Positioning.

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Breast milk and breastfeeding have undoubted benefits at all levels [1,2]. The factors responsible for effective breastfeeding have been extensively studied and reported by various researchers [3-6]. The four components of positioning are very vital in effective breastfeeding [7,8]. The modern cord clamps remain in place for few days (average 3-4 days) in all the babies. This foreign body in between the baby's abdomen and the mother's abdomen may affect the positioning while breastfeeding. We planned a study to see the effect of this cord clamp on appropriateness of breastfeeding positioning.

METHODS

The study was conducted in Neonatal unit of Hindu Rao hospital Delhi, India over a period of 4 months from August to November 2009. Ethical clearance was taken from the ethical committee of the hospital. 100 term normal appropriate for gestational age newborns were enrolled after obtaining a written informed consent. Babies were assessed at the age of 24 ± 6 hours in the postnatal wards. Those with congenital abnormalities, and babies who were sick and admitted in NICU were excluded. Vaginal deliveries assisted through episiotomy were also excluded. Mothers with significant discomfort after delivery were excluded. All the mothers were counselled antenatally by staff nurse. The plastic cord clamp used in the study was available in the hospital supply (Polyclamp Poly Medicine Limited). Cord clamp was removed by artery forceps with all aseptic precautions.

Between August to September 2009, 50 babies with cord clamp selected randomly from the post-natal ward were observed by a pediatrician for positioning using standard 4 point objective criteria during breast-feeding. Observer was not aware of the study. The maternal satisfaction score was also evaluated using 6 point questionnaire based on Likert's scale. Similarly, another 50 babies with cord clamp removed were also selected randomly during October to November 2009. Similar evaluation was conducted as for the first group; but by another observer. Satisfaction questionnaire was administered soon after assessment of breastfeeding positioning in both the periods. Counseling was done before administration of questionnaire.

At the end of assessment, the possibility of effective positioning by 4 point standard objective criteria with and without cord clamp was determined. Similarly, satisfaction score of mother were also assessed. Data entry and analysis were done using SSPS software. Continuous data with normal distribution was analysed by student t test and non normally distributed data by Mann-Whitney U test. Categorical data was analysed by chi-square or Fisher exact test. P value of < 0.05 was considered significant

RESULTS

Fifty babies each with and without cord clamp were enrolled. The mean (SD) gestational age in both the groups were comparable (with clamp: 39 (1.13) wk; without clamp: 39 (1.34) wk). **Table I** depicts the results

WHAT THIS STUDY ADDS?

- Cord clamp adversely affects the proper breastfeeding position in healthy term neonates.

TABLE I COMPARISON OF BREASTFEEDING POSITIONING OF BOTH GROUPS

Components	Group 1 (with cord clamp)		Group 2 (without cord clamp)		P value
	Yes	No	Yes	No	
1. Baby's head and body straight	33 (66%)	17 (34%)	47 (94%)	3 (6%)	0.001
2. Is baby's body turned towards mother and nose opposite the nipple?	49 (98%)	1 (2%)	44 (88%)	6 (12%)	0.112
3. Is baby's body touching mother's abdomen?	8 (16%)	42 (84%)	47 (94%)	3 (6%)	0.000
4. Is baby's whole body well supported?	36 (72%)	14 (28%)	48 (96%)	2 (4%)	0.002

TABLE II MOTHER'S SATISFACTION SCORE

Question	Group 1 (cord clamp)	Group 2 (no clamp)	P
1. Fear that cord clamp interferes with breast feeding	2 (1-2)	1 (1-1)	0.9
2. Concern about care of cord clamp	4 (2-4)	4 (4-4)	0.00
3. Fear that cord clamp interfere in routine care of baby	2 (1-3)	2 (1-4)	0.31
4. Does this cord clamp affect baby's skin?	2 (1-3)	2 (1-4)	0.08
5. Does this cord clamp affect daily clothing or unclothing of baby?	2 (1-2)	2 (1-4)	0.06
6. Does cord clamp affect KMC/prone positioning?	2 (1-4)	3 (1-4)	0.20

*Responses on five point Likert scale; 1=strongly disagree, 2=disagree; 3= neutral, 4=agree; 5= strongly agree.

of comparison of the two groups on positioning during breastfeeding. Satisfaction scores of mothers in the two groups are compared in **Table II**.

DISCUSSION

In the present study, it was seen that the presence of the commercial cord clamp on the baby adversely affected three out of four important points considered for a good positioning while breastfeeding. Hence, the head and body was straighter, the baby's body was touching mother's abdomen better and the baby's whole body well supported, when the cord clamp was absent (removed after 24 hrs).

Different authors have reported the role of educational programs and workshops to improve the knowledge of midwives in facilitating the positioning and attachment of breastfeeding in the immediate post-natal period. There are no studies that have investigated the effect of the commercial cord clamp on positioning while breastfeeding.

The limitation of the study was limited observations and non-uniformity of the education level among the mothers. The study had a strength that the observations were done in two periods with different policies, and the observers were different in both the periods. The changed policy of the cord clamp was only known to the investigator.

The presence of the cord clamp may be an important determinant of poor positioning while breastfeeding, especially in the early days of postnatal life. The policy of removal of the cord clamp after 24 hours may have a positive effect in strengthening the positioning and allay the common anxiety related to its care in the mother.

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